NOTICE TO PROPOSERS

Notice is hereby given that on April 2, 2013 at 9:00 A.M. (Eastern Standard Time) sealed proposals will start to be considered by the Triangle J Council of Governments and NC Next Generation Networks for:

THE PROVISION OF AN OPEN ACCESS
NEXT GENERATION COMMUNICATIONS NETWORK(S)

Specifications and instructions for this Request for Proposals are attached to this Notice. Additional copies may be obtained at the offices of the Triangle J Council of Governments located at 4307 Emperor Boulevard, Suite 110, Durham, NC 27703, or viewed, downloaded and/or printed at the following website: http://www.tjcog.org/nc-next-generation-networks.aspx. Office hours are 8:30 am to 5:00 pm, Monday through Friday.

POSTED: February 1, 2013

1. Glossary of Terms

NC Next Generation Network (NCNGN):	the name for the following municipalities and their respective Chambers of Commerce seeking development of Network(s): Cary*, Chapel Hill/Carrboro, Durham, Raleigh, and Winston-Salem with support of Duke University, NC State University, UNC Chapel Hill and Wake Forest University/Wake Forest Baptist Medical Center University
Next generation:	schedule of plans beginning with 100 mbps wireless up to 1 gbps or higher wired symmetric service
Network(s):	next-generation communications network solutions
Open access:	reasonable and non-discriminatory access arrangements that (i) ensure equivalence of price and non-price terms and conditions for all retail services providers and (ii) permit such providers to differentiate their product offerings
Requesting Entities (REs):	participating municipalities
Service Area:	Cary*, Carrboro, Chapel Hill, Durham, Raleigh, Winston-Salem
Vendor(s):	business entity or entities which respond(s) to this RFP

***** *The town of Cary's participation is pending their February 13, 2013 town council meeting.*

Introduction and Overview

The Triangle J Council of Governments and NC Next Generation Networks (NCNGN) are issuing this Request for Proposals pursuant to G.S. § 143.129.8, *et seq.* to develop the next-generation broadband infrastructure needed to meet the technological needs of current and future businesses, public institutions, educational institutions, and local residents. We are seeking network solutions and business models that are innovative, preparing our region for the future while serving the needs of today, and seek opportunities to best use existing public investments in currently underutilized government fiber and broadband assets to provide the maximum benefit to the public.

Vendors or coalitions of vendors are sought to achieve the following goals and objectives:

Goals

1. Create a gigabit, fiber network to foster innovation, drive job creation, stimulate economic growth, and serve new areas of development in the community;
    a. covers those areas prioritized in each community's Schedule with a negotiated plan for building out the remainder of each community;
    b. provides a comprehensive broadband infrastructure that can be expanded upon to serve other areas of the region; and
    c. provides service for a minimum of five (5) years from the date of first operation.
2. Provide an open access architectural framework that maximizes wholesale and retail service delivery and competition;
    a. provides non-discriminatory interconnects.
3. Provide a flexible menu of optional retail services
    a. offers supported retail broadband services with a guaranteed sustained minimum schedule of service ranging from a preferred 1 gbps with other options such as high speed wireless for certain market areas as well as temporary solutions with a timeline for permanent installation of the preferred solution; supports high quality voice, data, and video services, and telehealth solutions.
4. Use public-private assets to reduce the digital divide, enhance workforce knowledge and skills, promote economic development, enhance access for anchor

institutions, and serve other targeted social purposes identified by the participating municipalities;

   a. provides free or heavily discounted services to specified low-income neighborhoods (see each community's Schedule for a list of neighborhoods within each RE jurisdiction) and anchor institutions;

   b. creates a working relationship between local governmental units, vendors, and non-profit organizations to fund hardware and educational services for low-income residents, the elderly, and other underserved populations; and

   c. establishes free wireless networks in parks and public spaces in areas adjacent to the wired network.

5. Provide high speed internet service over a wired or wireless network at a substantial discount from current market prices.

   a. enables low wholesale access prices that reflect underlying costs while allowing Vendor(s) to earn a return on investment commensurate with the risks involved.

These goals support longstanding regional efforts to sustain and enhance our role as one of the research and technology hubs of the nation. To further these goals, the participating municipalities and associated governmental agencies may offer a variety of supporting assets, including access to existing, municipally-owned fiber; state and municipal rights-of-way; coordination with planned construction; colocation spaces; and the potential migration of existing service contracts for municipalities and off-campus university and healthcare facilities.

1.1 Network(s) Background

The objective of this Request for Proposal ("RFP") is to enable the participating municipalities ("Requesting Entities" or "REs") to engage, either collectively or individually, with one or more Vendors ("a business entity or entities which respond(s) to this RFP") to design, build, operate, support, and manage one or more open access, next-generation communications network solutions (the "Network(s)") that will enhance coverage and capacity to businesses, homes, governments, and institutions within and between those areas shown on Schedule 1.1 (the "Service Area"). "Next generation" service is defined as a schedule of plans beginning with 100 mbps wireless up to 1 gbps or higher wired symmetric service. Preference will be given to Vendors offering higher network speeds.

The initial implementation(s) will incorporate those capabilities deemed appropriate through collaborative planning between the local government representatives and

Vendor(s). The preferred solution is an open access/neutral hosting architecture that does not restrict access to other providers. However, the REs will consider proposals that have some variance on this preferred solution.

By "open access," the REs mean that the Network(s) will have reasonable and non-discriminatory access arrangements that (i) ensure equivalence of price and non-price terms and conditions for all retail service providers and (ii) permit such providers to differentiate their product offerings. In addition, the Vendor(s) must not limit the ability of retail service providers or their customers to run applications, use services, and connect devices of their choice to the Network(s). The selected Vendor(s) may build and operate the Network(s) on a wholesale basis. Under those conditions, the Vendor(s) will be expected to implement the open access requirement to ensure that retail services competitors will be given equal treatment.

The Vendor(s) chosen by the REs will bear all of the capital costs of the Network(s), including but not limited to design, engineering, construction, and equipment costs for the Network(s), up to the end user drop point or Network(s) interface device. In addition, the Vendor(s) will bear all the operating and maintenance costs, including insurance costs and relevant taxes, of the Network(s). Vendor(s) should also demonstrate a clear and continuous upgrade path for the Network(s) to meet future consumer demand and service developments.

In support of the public good that this network will provide and recognizing that current broadband markets do not support ultra-high-speed networks, the REs and supporting universities will, subject to applicable laws, make certain assets available at designated prices to the Vendor(s) including but not limited to dark fiber, co-location closets, and rights-of-way. REs will also consider entering into service contracts with prospective vendors. Further details are provided in section 1.4.

1.2 Nature of Entities Issuing RFP

North Carolina is organized into 16 regional councils, known as Councils of Government (COG). Each COG offers a broad range of services to local governments and addresses those regional issues that transcend political boundaries. Central North Carolina is served by two COGs, the Triangle J Council of Governments (TJCOG) and the Piedmont Triad Regional Council (PTRC).

The TJCOG and the REs are issuing this Request for Proposals to design, build, and, manage one or more ultra-high speed networks for the NC Next Generation Networks (NCNGN), composed of the following municipalities: Chapel Hill/Carrboro, Durham, Raleigh, and Winston-Salem ("Requesting Entities" or "REs") with the support of Duke University, NC State University, UNC Chapel Hill and Wake Forest University/Wake Forest Baptist Medical Center along with the Chambers of Commerce for the RE communities. *The town of Cary's participation is pending their February 13, 2013 town council meeting.*

This Request for Proposals ("RFP") is issued jointly by TJCOG and NC Next Generation Networks. The Vendor(s) chosen will enter into a contract directly with one or more of the listed REs, not TJCOG.

The Research Triangle is a rapidly growing sunbelt metropolitan region that is home to three premier research universities – Duke, North Carolina State University, and UNC-Chapel Hill -- and centered around the Research Triangle Park, a 7,000-acre research and development campus that straddles Wake and Durham Counties and is home to over 170 firms with about 40,000 workers. Now home to 1.6 million people, the region is projected to add another million people over the next generation. With a stable economic base of universities, medical centers, state government, and private firms in strong economic sectors such as biotechnology and pharmaceuticals, the region has garnered numerous accolades, including the recent listing of the Durham-Chapel Hill Metropolitan Area as the top region in the United States for "creative class" employment.

Once a thriving manufacturing town, Winston-Salem has transformed itself into a community of arts, culture, and innovation with a knowledge-based economy that takes its intellectual capital, from its research at universities, by entrepreneurs, and in private companies, and transforms it into companies and jobs, creating a high-tech business base in bio-medicine, life sciences, nanotechnology, design, and advanced manufacturing. By 2030, Forsyth County is projected to have nearly 440,000 people – an almost 25% increase from today. Fortunately, through foresight and progressive planning, the community is already preparing to house, educate, employ, and transport these new residents.

1.3 Overview

This RFP seeks proposals for the deployment and operation by Vendor(s) of a high-speed fiber Network(s) for the citizens, institutions, and businesses in the Service Areas. The general objectives are to establish a Network(s) that:

a. covers those areas prioritized in each community's Schedule with a negotiated plan for building out the remainder of each community;

b. provides a comprehensive broadband infrastructure that can be expanded upon to serve other areas of the region;

c. provides service for a minimum of five (5) years from the date of first operation;

d. provides non-discriminatory interconnects;

e. enables low wholesale access prices that reflect underlying costs while allowing Vendor(s) to earn a return on investment commensurate with the risks involved;

f. offers supported retail broadband services with a guaranteed sustained minimum schedule of service ranging from a preferred 1 gbps with other options such as high speed wireless for certain market areas as well as temporary solutions with a timeline for permanent installation of the preferred solution; supports high quality voice, data, and video services, and telehealth solutions;

g. provides free or heavily discounted services to specified low-income neighborhoods (see each communities Schedule for a list of neighborhoods within each RE jurisdiction) and anchor institutions;

h. creates a working relationship between local governmental units, vendors, and non-profit organizations to fund hardware and educational services for low-income residents, the elderly, and other underserved populations; and

i. establishes free wireless networks in parks and public spaces in areas adjacent to the wired network.

1.4 Assets, Facilities, Services to be Made Available by REs

REs will provide Vendor(s) with access to a common pool of the assets, services and infrastructure identified in Sections 1.4.1-1.5.3 below and listed in Schedule 1.3 to the extent available from the REs and needed by the Vendor(s) for deployment of the Network(s). Infrastructure may include, but will not be limited to, conduit, fiber, poles, substations, rack space, nodes, buildings, facilities, central office or switch locations, available land, and other assets and services identified below. Ownership of any and all such assets used by the Vendor(s) shall remain with the REs unless provided for otherwise by contract. Any network elements added by the Vendor(s) shall belong to the Vendor(s) but may be purchased at the end of the term by the REs at reasonable, depreciated market value. If such network elements are not so purchased and are no longer in use, the Vendor(s) shall remove such elements at REs' request. Individual REs may also offer access to additional assets, services, and infrastructure as identified in each communities Schedule.

The REs will charge Vendor(s) as may be authorized or required by law for access to REs' assets and infrastructure as set forth herein or as otherwise may be required by law. The REs will not provide funds for the design, construction, maintenance, or operation of the Network(s). Each REs' specific involvement is set forth in the Schedule section of this RFP.

The terms and conditions on which the assets, resources, and services in Sections 1.4 to 1.4.9 are made available by the REs are subject to contract negotiations between the parties as set forth in Section 3.8 below.

1.4.1 Fiber

REs (and/or their partner universities or other entities) may provide Vendor(s) with access to a negotiated number of strands of existing optical fibers owned or controlled by the REs and/or their university partners.

The intent of the REs is to make dark fiber available through a 10-year leasehold interest. Prospective Vendors may propose alternate property interests in the available dark fiber, but any provision of publicly owned fiber shall be subject to the disposition requirements of Article 12 of Chapter 160A of the North Carolina General Statutes, including potential upset bid requirements for any lease term in excess of 10 years. Vendor(s) will assume and bear all cost for operational maintenance responsibilities along segments covered by IRU to municipal fiber; this maintenance responsibility extends to all strands in a bundle including those retained by the RE. The Vendor(s) shall be responsible for emergency maintenance, and should the REs need to undertake any maintenance, the Vendor(s) shall reimburse the REs for such maintenance.

Vendor(s) will be responsible for activating/lighting the fiber for use. IRUs include access at handholds, manholes, and demarcation points, or for IRU transactions, the right of successful Vendor(s) to request their own access points to the fiber subject to engineering approval by and operational coordination with the RE to ensure no interruption in service to the strands used by the municipality. Approved access points will be billed to Vendor(s) at 110% of the cost to create the access. Vendor(s) will assume any net new costs to use existing RE assets, including any previously unlevied pole attachment/use fees or capital cost to expand poles.

REs may also contract with Vendor(s) to assist in the construction of new fiber in areas where RE or Vendor(s) need/demand exists but no current fiber is available. Such scenarios may include proportionately shared cost of construction over relevant segments with separate bundles for RE and Vendor(s) use.

The common pricing schedule for dark fiber and other municipal assets can be found in Schedule 1.3.

1.4.2 Conduit

REs may provide Vendor(s) with access to the existing conduit owned or controlled by the REs. The intent of the REs is to make conduit available through a 10-year leasehold interest. Prospective Vendors may propose alternate property interests in the available conduit, but any provision of publicly owned conduit shall be subject to the disposition requirements of Article 12 of Chapter 160A of the North Carolina General Statutes, including potential upset bid requirements for any lease term in excess of 10 years. Conduit use is subject to restrictions on access by RE, including presence of sufficient capacity within existing conduits; RE right to subdivide a conduit into multiple sleeves; RE right to allow multiple Vendors to share a conduit; and RE right to establish a minimum strand/bundle level for a particular conduit segment. Pricing includes the right to access conduit through handholds, manhole points, and other access points under RE control at which Vendor(s) may need to repair or install cabling or interconnect with network elements and infrastructure. RE shall be responsible for locating services and other commercially common stewardship of conduit including repair of damaged conduit. The RE shall negotiate a service level agreement (SLA) with the Vendor(s) based on commercially prevailing standards.

The common pricing schedule for conduit and other municipal assets can be found in Schedule 1.3.

1.4.3 Existing Network(s)

In addition to fiber, REs may own, control, and/or operate communications Network(s) within the Service Area. Individual REs or their partners may be in the process of constructing new Network(s). The REs may negotiate with the Vendor(s) to provide access to all or part of the existing or future networks.

1.4.4 Rights of Way

Construction and the installation of equipment in RE rights-of-way will be subject to the applicable requirements and ordinances of the REs. Subject to existing rights-of way and easements, the REs will allow Vendor(s) to have access to necessary rights-of-way on property owned by the REs and property on which it has an easement and authority to allow such access. Access will be provided in accordance with the applicable requirements or ordinances, but generally access will be provided during regular business hours for non-emergency work and 24 hours a day, 7 days a week in the event of an emergency. Access includes permission to perform construction work on RE property, including construction in the streets as needed for the Network(s), subject to any permit requirements that the REs have. The REs will assist in obtaining on a timely basis the required approvals to allow such work in said rights-of-way.

If requested, the REs will also cooperate with Vendor(s) in efforts to allow Vendor(s) to gain access to rights-of-way owned or controlled by third parties within the Service Area.

Planned street maintenance could be utilized to coordinate any proposed work with preexisting construction schedules and these schedules may have certain flexibility to align with a potential network rollout.

1.4.5 Pole Attachment Rights

The REs may provide Vendor(s) with access to existing utility poles owned or controlled by the REs. The mechanisms by which the REs will provide such access to the poles, along with fees that will be charged, are listed in the Schedule 1.3 and the Schedules for each individual community.

If requested, RE will cooperate with Vendor(s) in its efforts to gain access to poles owned or controlled by third parties within the Service Area.

1.4.6 Co-location Space and Power

The REs may provide access to segregated, secured spaces for telecommunications and network equipment within facilities owned or leased by an RE; this space may exist in telecom closets or equipment huts at tower sites, fire stations, municipal buildings, or other locations. This space is typically not tiered data center space, and is generally unconditioned beyond standard building climate control. Some locations may contain generator/UPS backup for electrical utility service, although REs are open to proposals from Vendor(s) to add redundant services. Vendor(s) may be responsible for installing a cage to segregate RE equipment from existing equipment; in this event, Vendor(s) may also choose to segregate their equipment within the shared space. REs will provide reasonable 24x7 access to the space for equipment maintenance and repair. The intent of the REs is to make space available through a 10-year leasehold interest. Prospective Vendors may propose alternate property interests in the available co-location space, but any provision of publicly owned space shall be subject to the disposition requirements of Article 12 of Chapter 160A of the North Carolina General Statutes, including potential upset bid requirements for any lease term in excess of 10 years.

Access to a segregated, secured space within a data center facility or computer room owned or leased by an RE used for servers, telecommunications, and/or network equipment may also be made available. REs may provide access to the space through routine IT operations processes or through accompanied access to the space; alternatively, Vendor(s) may choose to segregate Vendor(s) and RE equipment from each other in order for the RE to provide full access by Vendor(s) into the RE facility without escort. REs will ensure data center is capable of receiving electrical service, computer room air conditioning, and customary facility monitoring services. REs will provide reasonable 24x7 access to the space for equipment maintenance and repair. Vendor(s) will be required to adhere to municipal security policies and practices for working in such a space.

The common pricing schedule for co-location space and other municipal assets can be found in Schedule 1.3.

1.4.7 RE Contracts for Services and Assistance in Identifying and Generating Institutional and Enterprise Demand

The REs may negotiate individual commitments to purchase Network(s) services needed for RE operations (e.g., transmission capacity, Internet access, voice, video, security monitoring, cloud computing and storage) through the Network(s).

If requested, REs will provide Vendor(s) with publicly available information as to entities in the Service Area that are candidates to enter into contracts for fiber or Network(s) services. Such potential end-users may include educational institutions, large employers, and governments. An initial list of such entities and contact information for key personnel may be listed in the Schedules for each individual community.

The participating universities and their associated health care systems currently contract with multiple vendors for metro Ethernet and/or Internet services at off-campus facilities located throughout the Service Area. This service ranges from 10 mbps to 100 mbps asymmetrical service through POTS or coaxial service and costs approximately $2.6 million per year.

The universities and health care systems will consider moving some or all of these contracts, when they expire, to the new Network(s) created through this RFP, on the assumption that they would receive wired, next-generation symmetrical network service at speeds of 1 gbps or higher, or best-available equivalent and at prices commensurate with those that the successful Vendor(s) offers to other commercial customers in the Service Area. To this end, the universities are prepared to negotiate with the successful Vendor(s) on service at these locations, subject to all applicable procurement/bid practices and, for public institutions, all relevant laws and regulations.

1.4.8 Public Notifications

Triangle J, the Universities, and the REs may each publicize the proposed Network offerings in the same manner as other private economic development announcements within each RE's jurisdiction.

1.4.9 Other Assets, Facilities, Services

The REs may provide Vendor(s) with access to other assets and services that are owned or controlled by the REs and that will assist Vendor(s) in reducing the cost structure and shortening the design and construction schedule. Such assets are listed in the Schedules for each individual community.

1.5 Regulatory and Other Forms of Assistance to be Provided by REs

Each RE will provide Vendor(s) with a single point of contact (“SPOC”). The SPOC will be responsible for addressing all issues related to the Network(s), providing coordination across RE departments, ensuring the cooperation of all RE departments with respect to the Network(s) (provided that the requested assistance fits within the regulatory and strategic framework of the RE), and serving as a communications and troubleshooting resource for Vendor(s).

1.5.1 Timely Permitting

The REs will provide Vendor(s) with timely review of all applications for permits, including permits necessary for construction work on the Network(s) within RE rights-of-way and in connection with RE assets or infrastructure as shown in Schedule 1.3.

1.5.2 Timely Inspection

The REs will provide Vendor(s) with timely inspection of all work performed on the Network(s) as shown in Schedule 1.4.

1.5.3 Other Information

The REs may provide Vendor(s) with information about funds, grants, and contracts that can be directed to this Network(s), and may be able to provide Vendor(s) with assistance in applying for available grants or loans to pay for Network(s) expenses.

1.6 Relationship between Vendor and REs

Each Vendor will be an independent contractor that provides all design, construction, and operation services for the Network(s). The REs will have no ownership in the Vendor(s) that owns and operates the Network(s). The REs’ contract(s) with the Vendor(s) do not constitute franchise(s). The REs do not plan to regulate generally Vendor(s)’ business activities, nor to grant Vendor(s) a franchise for its activities and operations. The REs expect that the contracts and property instruments associated with this effort shall establish terms and conditions governing the use of public assets that are utilized by Vendor(s) in its service delivery to its customers.

2. Services Sought

2.1 Description of Services Sought

The REs seek a Vendor or a coalition of Vendors to design, build, install, operate, support, and manage a complete turnkey ultra-high speed communications Network(s) within the Service Area. The Network(s) will use Internet protocol technology and allow end users access to and from the Internet and access to other services as required. The RFP does not require a specific technology, but the REs expect that most potential Vendors will propose fiber-to-the-premises, Active E, GPON, and/or WDM/PON technologies to provide services to households, businesses, governments, and institutions throughout the Service Area. This Network(s) must include all active and passive infrastructure, including fiber cabling, active repeater equipment, uninterruptible power supplies, Network(s) cross-connections, software, and ancillary equipment.

The REs are looking for innovative solutions which may entail one or more Vendors collaborating together to create a turn key system.

Service descriptions must include complete system design, engineering, operations, monitoring, maintenance, customer support provisions, and enhancements. The Network(s) rollout will be based upon demonstrated demand by community residents, institutions, governments and businesses, and the availability of necessary infrastructure. The Network(s) design and operation should preferably provide an open access framework that maximizes wholesale and retail service delivery and competition.

2.2 Scope of Response

Vendor(s) shall design, build, install, operate, support, and manage the Network(s). Vendor(s) are encouraged to propose on all features with coverage over the full Service Area. If a Vendor chooses to propose on less than the whole, Vendor must provide details as to which features and Service Area(s) for which it is proposing, including the use of maps or other diagrams as necessary to sufficiently allow the REs to review Vendor's proposal. Vendor(s) should describe which, if any, of the turnkey services described below, it will provide. Vendor must explain or describe how it would allow for connection to other Service Areas in the event Vendor wishes to propose on less than the full Service Area.

The Network(s) shall have the following features and functionality which are identified in the Vendor(s)'s response to this RFP.

Service Area: A description of the geographic area within which the proposed network solution will be deployed.

- A map and build out schedule (GIS shape file). If less than the entire Service Area is being proposed on, Vendor's portion of the Network(s) must provide for interconnection at no cost with other portions of the Network(s). For full or partial coverage areas, no cost interconnect to the North Carolina Research and Educational Network (NCREN) is required. An explanation as to how Vendor(s) expects to accomplish all interconnections should be included in Vendors' response.

- An explanation as to how Vendor(s) expects to accomplish this interconnection should be included in Vendors' response.
- Detailed design for at least one multi-family dwelling (MDU), a downtown business district, a business park, a public housing development, and/or a residential neighborhood, if such feature is included in proposal; a
- A discussion of the anticipated deployment strategy, scope, and timing of the proposed rollout, including if there would be multiple phases of the deployment and availability of services and, if so, what services would be made available during each phase. The discussion should identify the levels of committed demand necessary to trigger rollout obligations and any factors likely to influence the scope or timing of the rollout and explain how those factors impact the strategy.

Service Offerings: A description of proposed wholesale or retail service offerings that the Vendor(s) anticipates offering to institutional, business, government, residential, and other potential customers. Response should address 1) pricing strategy, include anticipated rates for services and minimum time period those rates would remain in place without escalation, and limitations on increases in rates over time, and 2) an explanation of Vendor's willingness to work with the REs to develop unique pricing or packages for key community stakeholders and populations (e.g., government, university facilities, K-12 facilities and economically distressed areas), and 3) customer support model for each service.

Internet Services

- Residential
- Bulk internet to multi-dwelling units (MDUs)
- Dedicated business/institutional
- Wholesale Internet access service

Circuits

- Point to Point
- Multipoint

Optional Services

- VOIP services
- Wi-fi
- Video services

Vendors' response should include any other services that it will provide with its standard services or as optional services.

Technology Design: A description of the Network(s) technologies underlying the proposed Network(s) solution(s) included in the response. Each description should include the following information:

- Service Availability
  - Targets for uptime
  - Redundancy

- Design points for capacity
  - Capacity per customer
  - Number of fibers

- Maximum number of end point customers

Roles and Responsibilities: A description of the roles and responsibilities envisioned for Vendor, Vendor team members, REs, and subcontractors or third parties (if applicable) for each of the following:

- Network(s) design
- Network(s) construction
- Network(s) operations and management
- Customer support
- Publicly available information

Financial Projections: The business plan should include a pro forma financial statement, identifying projected capital outlays, ongoing operational costs, and expected revenues from wholesale and retail services for at least the first five years of construction and operation. The plan should identify and quantify all key assumptions underlying the calculations.

Material Tasks/Components: Vendor shall provide a breakdown or outline of the material tasks or components of the design, construction, operation and management of the Network(s) and its rollout.

2.3 Vendor Qualifications

Experience in High Speed Network(s) Design and Operation: Vendor should provide a statement of experience highlighting similar Network(s) systems that it has designed, constructed, and operated, including project name, location, size, technology used, and names and phone numbers for reference contacts. Also the proposal should indicate whether each system is owned by the Vendor(s) or another entity.

Financial Stability: Vendor(s) shall submit 1) 2011/2012 Dun & Bradstreet information supplement and 2) the two most recent annual audited financial statements to permit analysis of financial resources. If Vendor is part of a project group, the audits and Dun & Bradstreet report for each principal group member should be submitted. If the Vendor(s)'s response includes Vendor financing or committed bank or other financing, the audits and Dun & Bradstreet reports of such Vendors and financial institutions should be submitted. Security in the form of a letter of credit, bond or other security in the amount determined by the REs and Vendor(s) after negotiation will be required of the successful Vendor(s) to guarantee completion of the Network(s), and shall be held by the REs until completion of the Network(s).

Staff Technical and Managerial Experience: Vendor should include a statement of experience and resumes of the project team, including the project manager and other key personnel who will be assigned to this project. Also Vendor should include a list of any known or anticipated subcontractors along with their roles and responsibilities.

Insurance: At time of execution of a contract with the REs, the Vendor(s) will be required to provide a certificate of insurance in such amounts as are commercially reasonable, and shall indemnify the REs from any and all claims and losses associated with Vendor(s)'s Network(s) and operations, including use of REs' facilities.

Legal Capacity: Vendor's proposal shall include organizational documents filed with the applicable governmental agency (i.e., Articles of Incorporation or Articles of Organization) as well as a Certificate of Good Standing (or equivalent) from the applicable agency and any licenses to provide communications services that may be required by the North Carolina Utilities Commission, Federal Communications Commission, or any other applicable governmental agency. Additionally, Vendor shall provide a certificate that it is in good standing to do business in the State of North Carolina and that all of its business and regulatory registrations/filings/taxes are current, and all internal corporate documents, are up to date.

Regulatory and Legal Compliance: Vendor shall comply with all Federal, State, and local laws and regulations, including laws as to utility regulation.

Coalition: The above requirements shall apply to each member of a Vendor coalition.

3. Administrative Issues

3.1 Availability of the RFP and Amendments

An Adobe Acrobat (PDF) version of this RFP is available on the project website at: http://www.tjcog.org/nc-next-generation-networks.aspx. Amendments to the RFP will be posted on the project website, and it is the sole responsibility of the Vendor(s) to be knowledgeable of all amendments related to this RFP. Each amendment shall supersede the prior provision or language being amended. No amendment will be made less than ten (10) days, prior to the time that proposals are due.

3.2 Questions about the RFP

The primary RFP contact for the RE project team is: John Hodges-Copple at TJ COG.

All general correspondence and any questions about this RFP should be submitted in writing through the project website at http://www.tjcog.org/nc-next-generation-networks.aspx. The RE project team will not entertain any oral questions regarding this RFP. All questions received by February 15 will be answered by February 22. Questions received by March 1 will be answered by March 8. The last date for questions will be March 22, 2013 at 5:00 pm Eastern Time. All questions will be considered to be public and released with an answer through the project website as expeditiously as possible. The identity of the person responding to the question will not be disclosed. Vendors should not contact any RE directly for inquiries regarding this RFP.

3.3 Proposal Format and Certification

Proposals should be organized in the same sequence as Part 2 of this RFP with responses referencing the appropriate corresponding RFP sections and items. Vendors should respond to each item at the level of detail at which each is presented or list a variance with a particular item and propose alternate terms and, as applicable, and supply any supportive detail. Proposals not conforming to the proper format or failure to respond to any required items may result in rejection of the proposal. Where the Vendor(s) is requested to supply information, include that information in the body of the proposal, or reference the attachment where it is included. It is recommended that the proposals be submitted in a binder with a table of contents and tabs for ease of review and reference by the evaluation team.

In the case where multiple Vendors team to present a proposal, the lead Vendor should be designated and will be the contracting Vendor. The lead Vendor will confirm that it will subcontract with its partner Vendors.

3.4 Project Calendar

RFP Advertised and issued: February 1, 2013

Proposals Due (60 days): April 1, 2013

Proposal Evaluation Completed by (30 days): May 1, 2013

Negotiation concluded with top proposers no later than (90 days): August 1, 2013

Contract approval by elected bodies: September 27, 2013

Contract finalized and signed with Vendor(s): October 11, 2013

These dates are the anticipated schedule which may be altered by the REs at their discretion.

In order to limit the expense from each Vendor in developing the design, the design will be titled "Preliminary" so it is expected that the Vendors will not expend a large amount of time and resources in responding to this RFP. Once a Vendor is selected by the evaluation team for negotiation, the selected Vendor(s) will need to expend a significant amount of engineering resources in developing the final design plan. If, in the evaluation teams' judgment, the final design deviates from the proposal in a manner that creates hardship or provides substantially fewer services than called for, the REs reserve the right to terminate contract negotiations without cost or further obligation to them.

3.5 Proposal Due Date and Submission

Sealed proposals are due by 5 p.m. EST on April 1, 2013. Proposals received after the deadline will not be considered. Proposals must be submitted electronically or via priority or certified mail. Two (2) hard copies and one (1) complete electronic version are required for any proposal submitted in hard copy format. Faxed proposals will not be accepted. Vendors assume the risk of the methods of dispatch or delivery chosen. Office hours for receipt of mailed or expressed proposals are: Monday through Friday, 8:00 am - 5:00 p.m. (EST).

Electronic proposals must be uploaded to the project website at http://www.tjcog.org/nc-next-generation-networks.aspx. All electronic files must be submitted via the website in PDF format and must not exceed 60MB in size. (Larger submissions should be made via postal transmittal of CD or other electronic media.)

3.6 Process and Criteria for Evaluation of Proposals

Proposals will be opened and reviewed by the evaluation team. All proposals will be evaluated and, at the teams' discretion, negotiations will ensue with two to four Vendors or coalition of Vendors who demonstrate the best ability to meet the overall goals of the project, with particular emphasis on the ability to fulfill the scope of work in a timely and efficient manner. The evaluation team, whose members will be chosen by the REs and their university partners, will initially assess the responsiveness of each Vendor's proposal based on the following criteria:

- Quality of response
- Extent of the Service Area
- Technical quality of design and support plan
- Experience of project team
- References
- Vendor(s) experience
- Financial strength of Vendor(s)
- Feasibility of Vendor(s) financial proposal

In addition to the above criteria, the evaluation team will examine the extent to which each proposal meets the criteria below, which are not listed in order of importance. The evaluation team will then undertake a comparative assessment of all proposals to make a decision as to which proposals should be selected for further analysis and negotiation. These criteria include:

a. the extent to which the proposal meets the objectives for the Network(s) (as set out in Section 2);

b. the capability of a single Vendor(s) or coalition of Vendors to design, construct, finance, maintain, support, upgrade, and operate the Network(s);

c. the nature, scope, and impact of any legislative and/or regulatory changes (state or local) that are necessary to facilitate the proposal;

d. the extent to which the proposal departs from the RFP and from the REs' proposed terms;

e. the location and size of the Service Area that a Vendor is proposing.

The REs' decision on the most responsive proposer or proposers shall be final. Ultimately, each RE will be the final decision maker for Vendor selection within their own jurisdiction, which such decision shall be made in that RE's sole discretion.

3.7 Clarification And Acceptance of Proposals

The REs reserves the right to:

- Conduct discussions with any or all potential Vendors for the purpose of clarification of proposals;
- Waive, or decline to waive, defects in any proposal;
- Accept, reject, or negotiate any or all proposals or the terms of any proposal, or any parts thereof, for the purpose of obtaining the best and final offer;
- Cancel or amend this RFP or issue other requests for proposals;
- Make partial award(s) of the RFP to one or more Vendors.
- Select a Vendor or coalition of Vendors based on its analysis and evaluation of proposals submitted and request presentations on proposals if it believes further information is appropriate to the decision-making process;
- Select no proposals at all; or
- Use any and all concepts presented in any proposal to obtain the most beneficial and effective path to achieving its desired goals for the project.

3.8 Negotiation and Execution of Contracts

The selected Vendor or Vendors will be asked to negotiate a contract with one or more of the REs within ninety (90) days of the evaluation of the proposals.

3.9 Commencement of Work

The submission of a proposal in response to the RFP, and the subsequent evaluation of that response, does not constitute a contract or any type of agreement between the RE and any Vendor for the commencement of work or the performance of any obligation. Only a written contract with the REs will authorize the commencement of work or obligate any RE on this project.

3.10 Use of Subcontractors

Vendors may use subcontractors to fulfill any obligations in connection with the project. Use of subcontractors shall be subject to all applicable laws. A Vendor shall remain liable for fulfilling all its obligations on the project, and for any claims or damages arising from the subcontractor's work.

3.11 Miscellaneous Provisions

3.12.1 Proposal Costs and Disclosure

Responding Vendors are responsible for all expenses they incur in preparing and submitting a proposal or in contract negotiations with the REs. If they elect to reject all proposals, the REs will not be liable for any costs or damages incurred by any Vendor in preparing and submitting a proposal.

3.12.2 Public Records Obligations of Participating Municipalities and Public Universities; Submission of Trade Secret Materials

The REs are public entities. As a result, this selection process and any materials submitted pursuant to it may be subject to a variety of public inspection requirements, including, but not limited to, federal and state records disclosure statutes. To promote maximum competition and to protect the public bidding procedure from being used to obtain information that would normally not be available otherwise, the REs agree to maintain the confidentiality of trade secrets to the extent allowed by North Carolina law. Confidential or trade secret materials must be submitted in response to this RFP in accord with the instructions set forth herein. The obligations of non-disclosure shall not apply to the following:

1. Information which, at the time of disclosure, is public knowledge;

2. Information which, after disclosure, becomes part of the public knowledge by publication or otherwise;

3. Information which was in the possession of one or more REs at the time of disclosure and which was not acquired, directly or indirectly by recipient from the disclosing party, and which prior possession can be proven by documentary evidence;

4. Information received from third parties, provided such information was not obtained to their knowledge by said third parties, directly or indirectly, on a confidential basis;

5. Information which is independently developed by the REs' personnel not privy to the information.

6. Any material that does not qualify as "confidential" or as a "trade secret" under the provisions of Chapter 132 of the North Carolina General Statutes.

Materials designated as trade secrets must be submitted in a separate, sealed envelope marked "Trade Secret Proposal - Confidential and Proprietary Information - Do Not Disclose Except for Purpose of Evaluating this Proposal" and the same trade secret/confidentiality designation should be stamped on each page of the materials for which trade secrets protection is sought. In submitting a proposal, each respondent to the RFP agrees that the REs, Triangle J, and the participating universities may reveal any trade secret materials contained in their response to all appropriate staff and officials involved in the selection process as well as any outside consultants or third parties hired or retained by the REs, Triangle J, or the participating universities to assist in the selection process.

By submitting a proposal, each respondent to the RFP agrees to indemnify and hold harmless the REs, Triangle J, and participating universities and each of their officers, employees, and agents from all costs, damages, and expenses incurred by any RE, Triangle J or participating university in connection with a public records or inspection request as to material that the proposer has designated as confidential. Any proposer that designates its entire response as a trade secret may be disqualified from the selection process.

If any RE, Triangle J, or public university receives a request to disclose materials that have been labeled as a trade secret or confidential by the proposer, the recipient of the request (the "Recipient") shall provide the proposer with notice of the request. Within five (5) calendar days of the receipt of this notice, the proposer must notify the Recipient of whether or not it instructs the Recipient to withhold the materials from public inspection and the proposer must seek, at its sole cost, appropriate judicial action to prevent the disclosure of the materials. If the proposer notifies the Recipient to withhold materials from public inspection, said notice must also include a legal justification for why the withheld materials qualify for exemption from the North Carolina public records act. If such justification is not provided with the notice to withhold materials, the proposer acknowledges that the notice shall be void and deemed of no effect and that the Recipient may release the information without penalty. Further, if the proposer does not take action to prevent the disclosure of the materials within this five (5) calendar day period, the Recipient may release the information pursuant to the public records request without any penalty from or liability to the proposer.

3.12.3 Errors and Omissions in a Proposal

The responding Vendor is responsible for all errors and omissions in its proposal. If it discovers an error and wishes to withdraw its proposal, the responding Vendor should notify the REs immediately in an e-mail or in writing which is signed by an authorized agent and which identifies the nature of the error or omission made.

3.12.4 Errors and Omissions in the RFP

If the REs become aware of an error or omission in this RFP, they will post a notice on the website. If the REs discover an error or omission after the proposals are submitted, they may at their discretion proceed or reissue the RFP. Even if they elect to reissue the RFP, the REs will not be liable for any costs or damages incurred by any Vendor in preparing and submitting the original proposal.

3.12.5 Objections to RFP Terms

Any objections to or questions about this RFP's terms must be conveyed in writing to the electronic mail address provided in Section 3.2 and must be submitted by the deadline for submission of questions about the RFP in Section 3.2 above.

3.12.6 Acceptance of RFP/Proposal Content

By submitting a proposal, a Vendor certifies that it has read, understood, and agreed to the requirements, terms, and conditions in this RFP, including any and all attachments, exhibits, and appendices.

3.12.7 Waiver of RFP Provisions

The REs may at their sole discretion, but are under no obligation to, waive any provision in this RFP at the written request of a Vendor. Any such waiver shall apply to all potential Vendors, and no waiver shall constitute a waiver of any provision not specifically referenced therein.

3.12.8 Disclosure and Confidentiality of Proposals

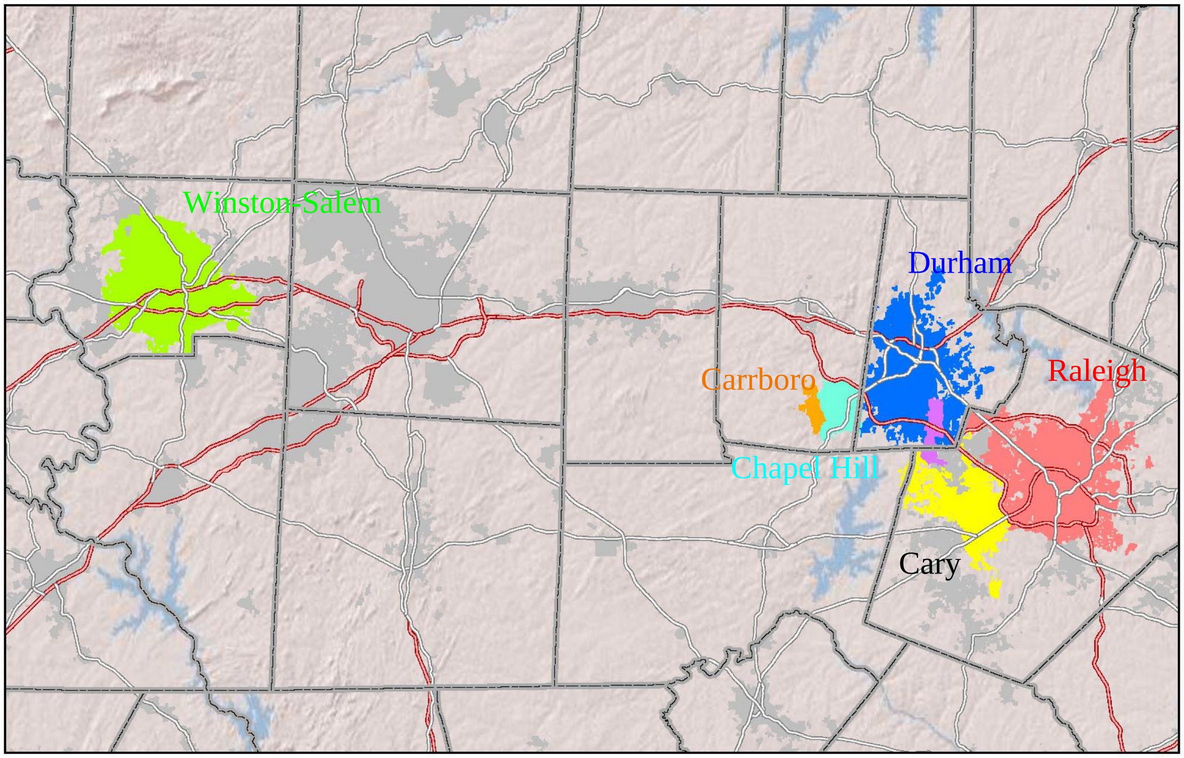
Proposals will not be returned and may be subject to disclosure pursuant to Federal and State laws. Under no circumstances shall the REs be held liable for any disclosure of any information submitted if such disclosure is inadvertent or required by any applicable law.

3.12.9 Release and Hold Harmless Agreement

By submitting a proposal, each Vendor agrees to release and hold harmless the REs, Triangle J Council of Governments, and the four research Universities and their respective officers, directors, trustees, employees, and agents ("Releasees") from all claims, costs, damages, liabilities or expenses ("Claims") in connection with or arising from the preparation and submission of a response to this RFP, the accuracy or omission of any information furnished in connection with this RFP, the actions of any Releasee in the conduct of this RFP process including evaluation of Vendor's proposal, any economic benefit lost or damages incurred by a Vendor, or any other Claim connected with or arising in any way from the RFP process.

Schedule 1.1

NC Next Generation Network Service Area Map



Schedule 1.2

List of Requesting Entities (REs)

*Cary NC: http://www.townofcary.org/

Carrboro NC: http://www.townofcarrboro.org/

Chapel Hill NC: http://www.townofchapelhill.org/

Durham NC: http://durhamnc.gov/

Raleigh NC: http://www.raleighnc.gov/

Winston Salem NC: http://www.cityofws.org/

***** *The town of Cary's participation is pending their February 14, 2013 town council meeting.*

Schedule 1.2.1

List of Supporting Universities

Duke University: http://www.duke.edu

North Carolina State University: http://www.ncsu.edu

University of North Carolina at Chapel Hill: http://www.unc.edu

Wake Forest University/Wake Forest Baptist Medical Center University:
http://www.wfu.edu and http://www.wakehealth.edu/

Schedule 1.3

Common Assets, Services and Infrastructure

Asset	Existing Resources
Dark fiber	Annual $75 per fiber strand per mile for 9.9 year contract (maintenance to be provided by vendor, equivalent to $350 per strand mile per year)
Conduit	One time $1,000 per route mile, one half-mile minimum charge
Telecommunications closet (small/incidental use, e.g., interconnection point)	No fee or nominal-only fee
Telecommunications closet (full equipment rack)	$750 per rack per month for space access plus twenty ampere service of electrical power
Municipally controlled rights of way	Negotiable

Data Center/Co-location Services (charged monthly per cabinet unless otherwise stated)	Price
Co-location hosting one-time setup fee, APC NetShelter cabinet and Koldloc	$1,500
Co-location hosting one-time setup fee, Koldloc only (Customer has useable cabinet)	$100
Basic co-location hosting service (One Rack Location Unit = 24” x 96” = 4 floor tiles)	$325
Additional Gigabit Ethernet uplink connections, Copper (Fiber is extra)	$60
20-A, 110-V power circuit (Install fee is extra)	$120
20-A or 30-A, 208-V power circuit (single phase) (Install fee is extra)	$165
20-A or 30-A, 208-V Three Phase power circuit (Install fee is extra)	$200
60-A, 208-V Three Phase power circuit (Install fee is extra)	$200
Firewall Context Services (Cisco FWSM)	$100
Load Balancer Context Services (Cisco ACE)	$300
1/4 Shared Cabinet 10U (Includes GigE Network & ten 110v receptacles (total 10a))	$285
1/2 Shared Cabinet 20U (Includes GigE Network & twenty 110v receptacles (total 20a))	$365

Schedule 2.1

Town of Cary Introduction

(PLEASE NOTE: CARY PARTICIPATION IS PENDING THEIR FEBRUARY 13 TOWN COUNCIL MEETING.)

Cary is a thriving community in the heart of the Triangle area of North Carolina, between Raleigh and renowned Research Triangle Park. The Triangle area repeatedly has ranked among the top regions in the country to live or work, to find a home or start a business, to raise a family or retire.

The January 2004 issue of Money Magazine names Cary, N.C. the hottest town in the East and one of six Hottest Towns in America. In August 2006, Cary was again recognized by Money Magazine as one of the Best Small Cities in America, ranking fifth on the magazine's 2006 list of Best Places to Live.

On the whole, Caryites are a blessed, hard-working group with one of the highest median household incomes in the state. And being no further than 20 minutes from major universities such as Duke, North Carolina State, and the University of North Carolina, it's no wonder that education is an important part of Cary life. More than two-thirds of adults hold a college degree. About 94 percent of citizens have access to the Internet in this, the Technology Town of North Carolina. Cary embraces the best of city life:

Our sense of security. Cary continually ranks as one of the top 20 safest large cities nationally and the safest in the Southeast. Its Police and Fire departments and Emergency Medical Services are nationally accredited.

Livability. Tree-lined streets and well-groomed subdivisions and office parks show Cary has grown the right way.

Vibrancy. Cary is home to world class businesses and national retail stores. Our fast-growing Parks, Recreation and Cultural Resources program has something for everyone, regardless of age or interest.

Diversity. School-age children comprise nearly a quarter of Cary's population. Yet people of retirement age are the fastest-growing group in Cary. Fourteen percent of townspeople were born in another country, and the Asian population - Cary's largest minority - tripled during the 1990s.

A progressive approach to challenge. Cary is proactive. We're conserving drinking water by reclaiming treated wastewater for irrigation and industrial processes, preserving open space, and working with citizens and county leaders to make our schools even better.

Yet we've remained the *Town* of Cary while growing to more than 100,000 people.

At the Town of Cary, we focus every day on enriching the lives of our citizens by creating an exceptional environment and providing exemplary services that enable our community to thrive and prosper.

Cary by the Numbers

Population: 141,132 (January 2012)*
2.12 percent increase since January 2011

Median age: 33.7 years (2000 Census)

GPS Location: (Chatham and Academy streets) -78.7812 35.7873

*Population estimate based on the reported number of Certificates of Occupancy issued in the Town.

COMMUNITY GOALS FOR GIG.U NETWORK DEPLOYMENT

The Town of Cary in interested in responses that would provide high-speed broadband service to office buildings, many business locations; multi-family dwelling units (MDU); government facilities; including schools, community colleges, and local government facilities; and hospitals. Cary primarily seeks respondents to offer Internet/data service to customers over the proposed network with gigabit synchronous speeds. Respondents may choose to propose offering additional communications services (e.g., video) subject to any state or local regulatory or franchising requirements. For commercial customers, the respondent should outline the nature of its offerings to commercial building owners and MDUs who might make such service available for some or all tenants, as well as for service offerings where the individual tenant is the customer.

The Town of Cary has invested several million dollars in refocusing the downtown area to make it a destination for programs and events. Part of this includes purchasing and restoring a movie theater and acquiring over twelve acres of property to create a downtown park and other uses. The high speed service would be an asset to small businesses in this part of town as well as providing the backbone for downtown wireless services for public access.

Cary is also home to the world's largest privately owned software company (SAS Inc.) as well as an American Airlines Reservation Center, Garmin Inc., Capital Associates, and the Cary Innovation Center. In addition Cary has a regional hospital, Wake Medical Cary which is part of the Wake Medical Hospital Group. Cary has several large office parks with a variety of highly technical companies and we border the Research Triangle Park.

Many of our residents are employees of Cisco, IBM, NetApp, and other companies in Research Triangle Park.

Currently it is difficult to get broadband service above a few megabits in speed (if it is even available) unless one is willing to pay a very high price. The Town feels this new high speed service would greatly benefit our citizens both business and residential.

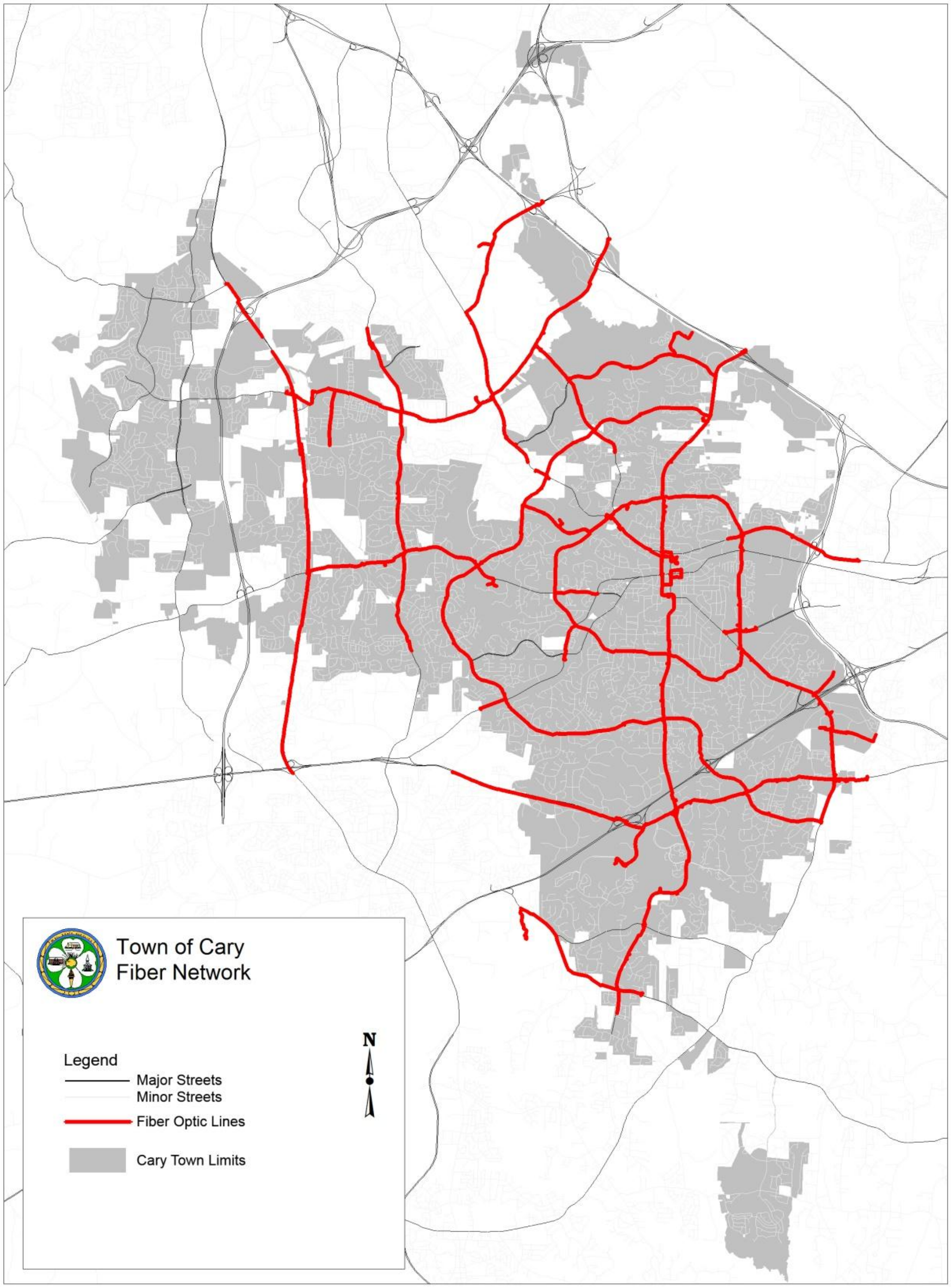
Schedule 2.2

Town of Cary Fiber Assets, Conduit, Additional Networks, Poles and Facilities Available to the Vendor(s), including Fees and Mechanisms for Availability

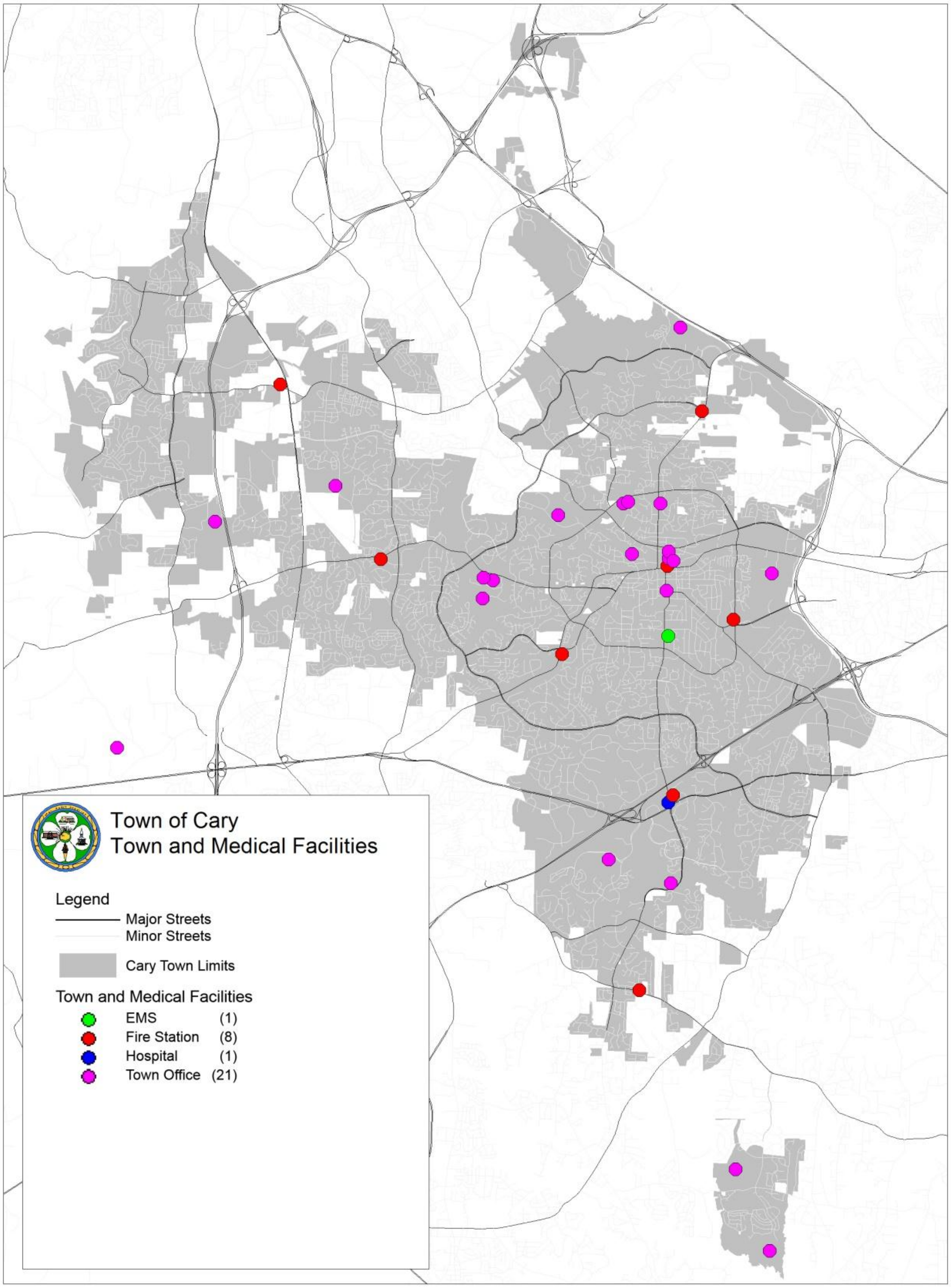
In 2000 the Town of Cary hired Gartner, Inc. to do a feasibility study and a business plan for fiber to the home in Cary. An RFI was issued and a company was chosen to do the project. Shortly after that the Dot Com downturn happened and the company lost its funding. The Town Council chose at that time not to pursue the project any further. While the study is over ten years old many of the findings (such as projected subscription take rates and etc.) would be as good or better today than they were in 2000. That complete study is available.

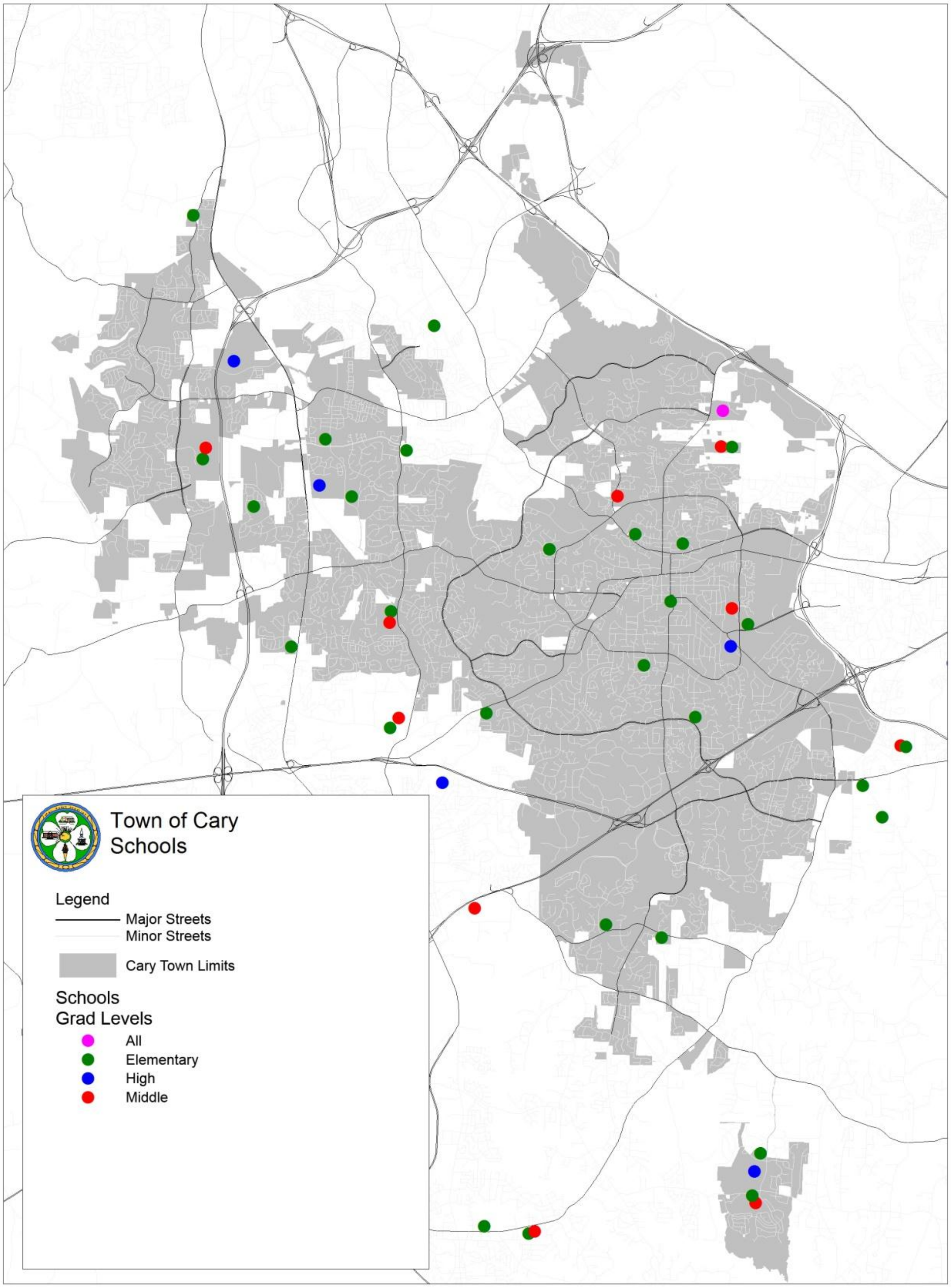
The Town of Cary also has long term fiber needs and has a capital project for FY12 to hire a consultant to study its long term fiber needs. Any results of this study would be made available and the Town would be willing to discuss the potential for shared resources as a part of this project. Cary doesn't have access to any poles since all of the poles in Cary's jurisdiction are owned by either Duke Energy (the former Progress Energy) and AT&T. Access to these poles would need to be negotiated with the individual entities.

The Town of Cary does have its own fiber network which connects about twenty five of its facilities and it also supports its traffic control system but at this time doesn't have any additional fiber capacity available. Some underground empty conduits are available and the Town would be willing to discuss the potential use of these conduits. The town does have many miles of street right-of-ways in which we would be willing to discuss access to in the future. The Town owns several towers and elevated water tanks as well as three data centers (soon to be four of which two are centers for our 800 MHz Radio System) in which we would be willing to discuss the potential of shared space or rented space for the respondents. Respondents should state their interest in using such facilities to determine the precise need, availability and terms of use.


Town of Cary
Fiber Network
N
Legend
Major Streets
Minor Streets
Fiber Optic Lines
Cary Town Limits

4.


Town of Cary
Town and Medical Facilities
Legend
Major Streets
Minor Streets
Cary Town Limits
Town and Medical Facilities
EMS (1)
Fire Station (8)
Hospital (1)
Town Office (21)


Town of Cary
Schools
Legend
Major Streets
Minor Streets
Cary Town Limits
Schools
Grad Levels
All
Elementary
High
Middle

Schedule 2.3

Town of Cary Fiber Master Permit for Right of Way Agreement, Encroachment Agreement or Franchise Agreement

(not available)

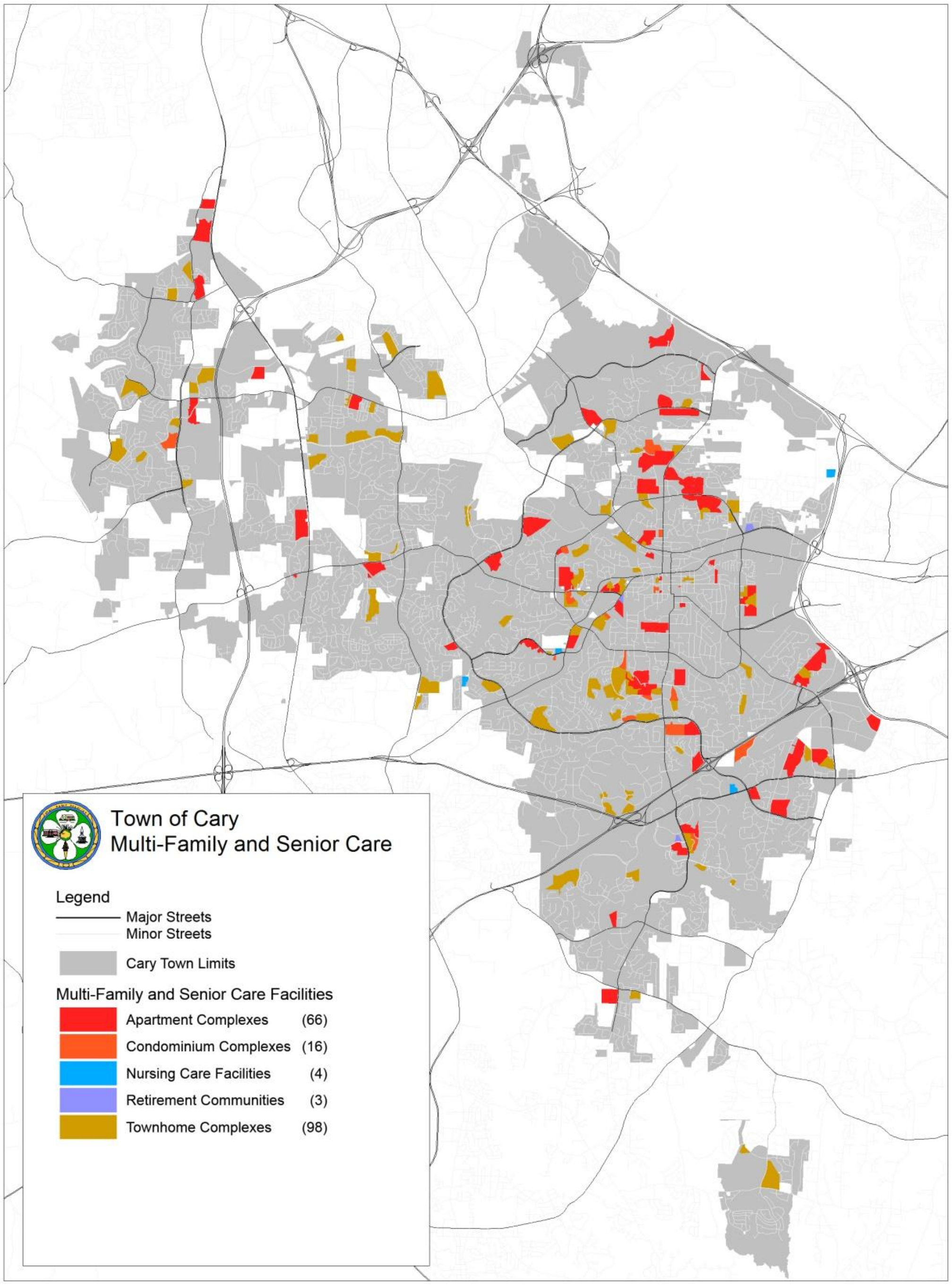
Schedule 2.4

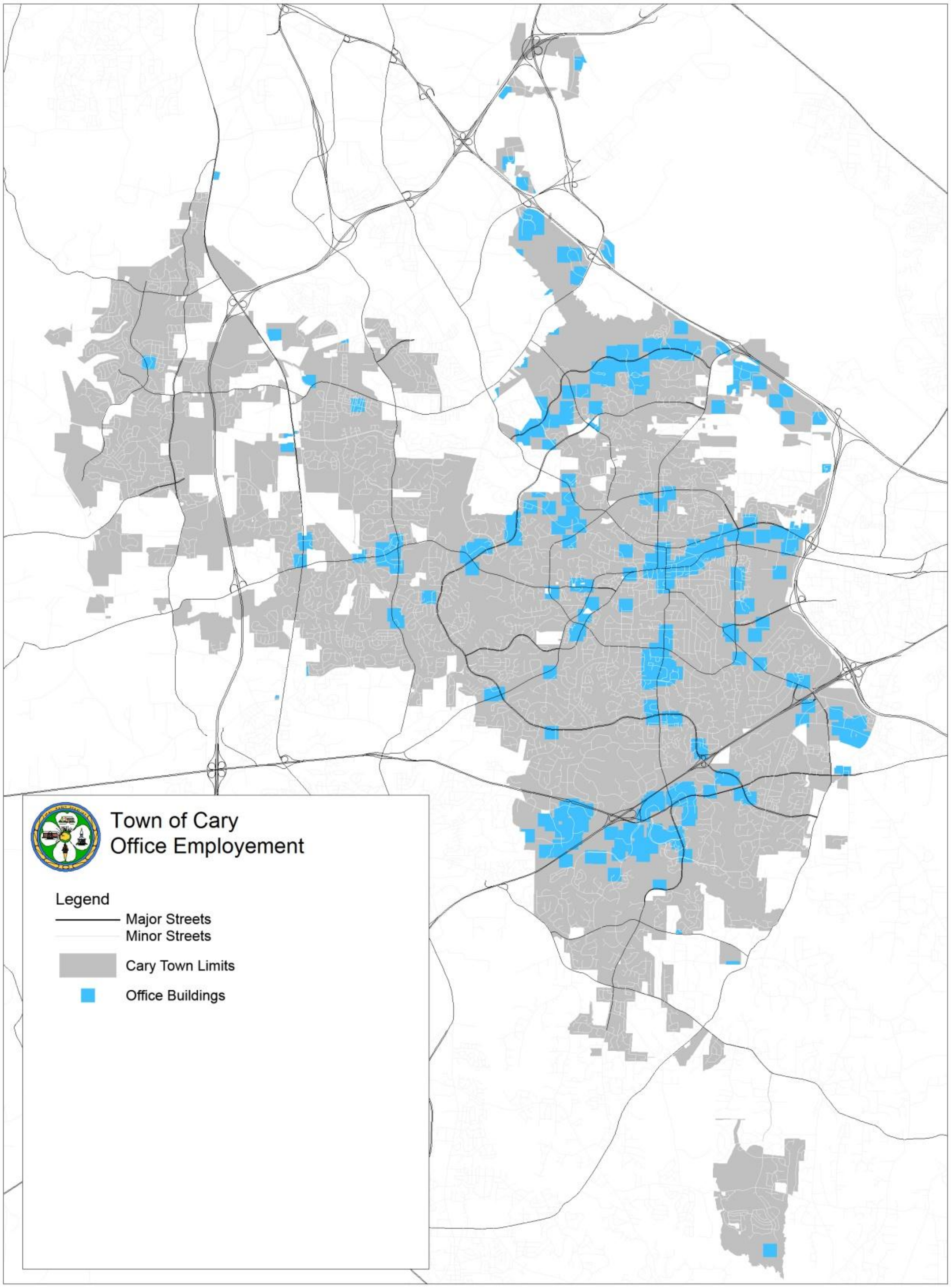
Town of Cary Low-income Neighborhoods Map

(not applicable)

Schedule 2.5

Town of Cary Demand Maps


Town of Cary
Multi-Family and Senior Care
Legend
Major Streets
Minor Streets
Cary Town Limits
Multi-Family and Senior Care Facilities
Apartment Complexes (66)
Condominium Complexes (16)
Nursing Care Facilities (4)
Retirement Communities (3)
Townhome Complexes (98)


Town of Cary
Office Employement
Legend
Major Streets
Minor Streets
Cary Town Limits
Office Buildings

Schedule 2.6

Additional Assets To Be Provided To Vendor

(to be negotiated)

Schedule 3.1

Towns of Chapel Hill and Carrboro Introduction

Chapel Hill and Carrboro, adjoining Towns, are the home to the University of North Carolina at Chapel Hill and UNC Healthcare. With more than 30,000 residences and 2,000 small businesses, Chapel Hill and Carrboro constitute a vibrant and growing community, dedicated to education, public service, the arts, medical and hi-tech research and services and entrepreneurship. This area is known for its diverse, youthful and culturally minded population. These towns are also within the state's Research Triangle, which boasts one of the highest numbers of Ph.D.s per capita in the U.S.

The Research Triangle Park, originally created through a partnership with UNC, Duke, and NC State, has the largest concentrations of high-tech workers in the country creating a strong and innovative business climate. This region is a center for life sciences and technology that reflects the research strengths of the region’s renowned learning institutions. This association, as well as the rich history with the University of North Carolina, continues to position both towns for growth and technological innovation. Recent growth projections anticipate the addition of another 50,000 residents over the next 20 years.

UNC at Chapel Hill, with 29,000 students and 12,000 faculty and staff was chartered as the nation’s first public university in 1789 and opened to students in 1795. The university’s research budget is over $700 million, 71% of which comes from federal sources, making UNC Chapel Hill 9th among leading private and public research universities for the level of federal funding. UNC Chapel Hill ranks third in the South and twentieth overall among university graduate entrepreneurship programs, according to Entrepreneur Magazine and the Princeton Review.

The UNC Health Care System is a not-for-profit integrated health care system, owned by the State of North Carolina and based in Chapel Hill. A distinguishing characteristic of UNC Health Care is its association with the UNC-Chapel Hill School of Medicine, a nationally eminent research institution. As an effect, more than 660 health care physicians live within the 28 square miles of Chapel Hill and Carrboro.

Chapel Hill and Carrboro are joining with other regional partners to build a region-wide ultra-high speed network that will promote economic competitiveness and access to online services that are now essential to the quality of life in the 21st century. Town leaders funded a 30-mile fiber ring with core fiber runs encompassing both Towns. This fiber-loop positions the Chapel Hill and Carrboro community to grow the commercial base, improve access to the Internet for all regardless of income level, and improve service to local businesses and residents, visitors, and the anchor institutions of UNC at

Chapel Hill and UNC Healthcare. These fiber networks also benefit from having geographically close access to high capacity Tier1 Points of Presence through MCNC's statewide research and education network, NCREN, located on the UNC campus. MCNC is a $144 million Broadband Technology Opportunities Program (BTOP) middle mile recipient.

Few communities in North Carolina have had the foresight to create such an opportunity for themselves or have been fortunate enough to obtain a network of this size. Chapel Hill and Carrboro are known for their eclectic populations and for their strong interest in fostering the needs of their communities and citizens which includes participating in initiatives that are recognized on a national level.

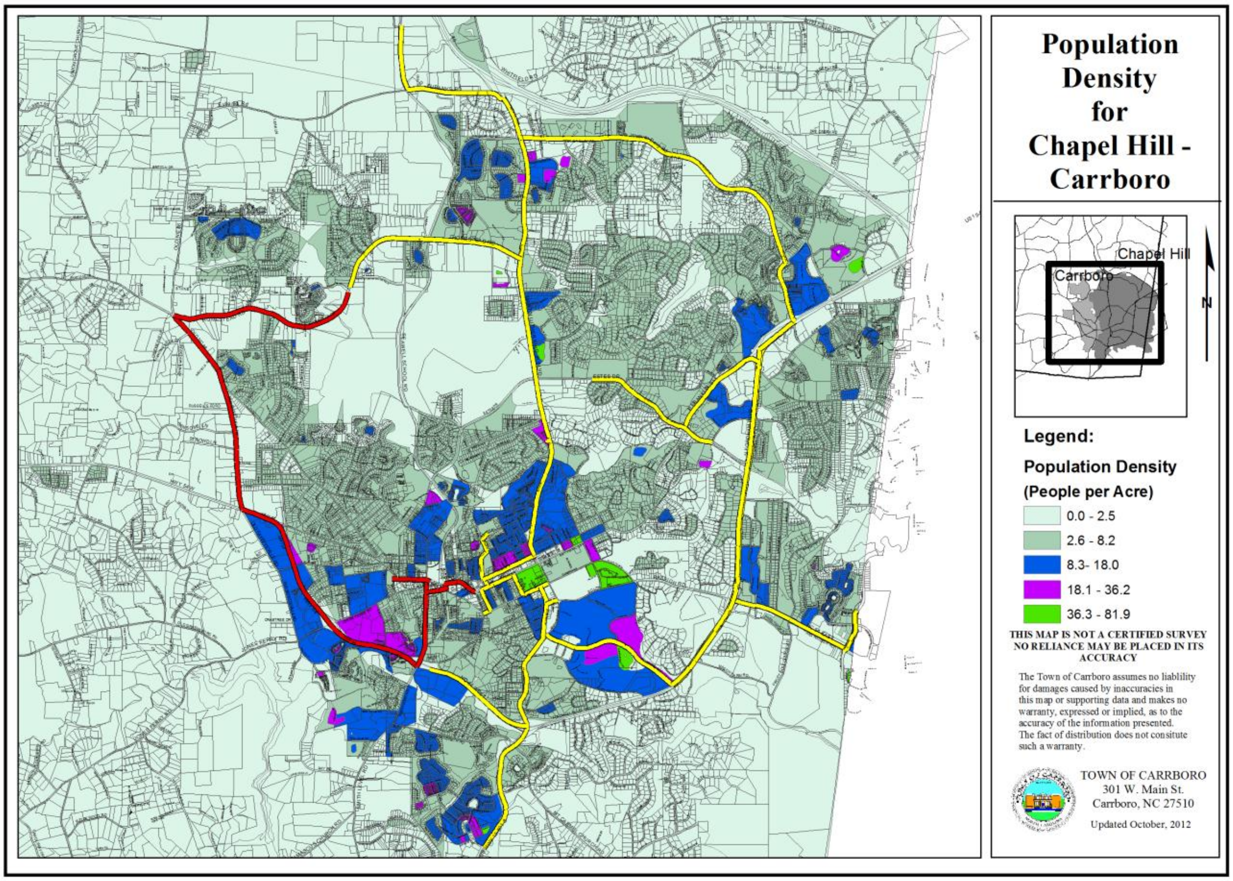
COMMUNITY GOALS FOR GIG.U NETWORK DEPLOYMENT

The UNC, Chapel Hill and Carrboro community are interested in gigabit broadband networking for research, education, and community use. Areas of focus include but are not limited to:

Serving our low-income citizens. The local school district has made a concerted effort to bridge the digital divide among school-age residents over the past 10 years; however, as new technologies emerge and as bandwidth becomes increasingly expensive, the challenge escalates. We are looking for cost-effective, creative solutions that will serve students and their families to ensure that all children have equal access to knowledge tools. We wish to serve public housing communities and low-income neighborhoods as part of our commitment to education and economic development. Schedule 3.4 identifies low-income neighborhoods and further underscores the importance of addressing the digital divide in the Chapel Hill and Carrboro Community.

Economic development. Chapel Hill and Carrboro have a long standing commitment to compact development leading to relatively concentrated commercial centers. The greatest interest from our business owner survey comes from the two downtown areas, but businesses in three other mixed use centers have also responded positively. This includes at least one business incubator (others planned), a multitude of retail and professional services offices, a growing number of technology-based businesses, as well as several national and international corporations. More rigorous outreach will need to be pursued before a final priority list can be developed. We are looking for cost-effective solutions that will meet the range of needs from our diverse business community.

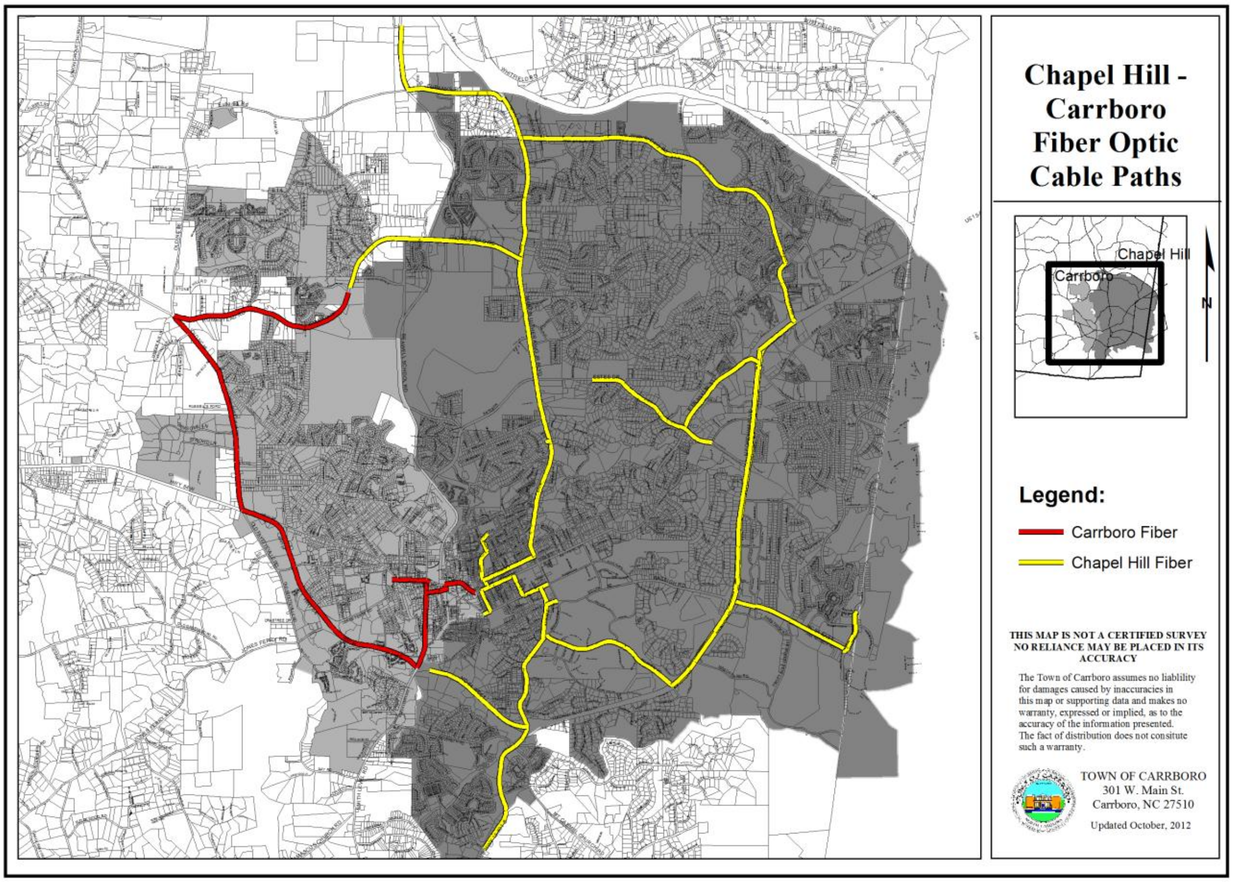
Residential Neighborhoods and Multi-Unit Dwellings. The Chapel Hill and Carrboro community is characterized by higher per household densities. Carrboro's 2010 Census population density was 3,019 people per square mile including 9,258 housing units at an average density of 1,424 per square mile. Chapel Hill population density was 2,687 people per square mile. As a university community, we have an ever-growing number of home-based businesses as well as residents who would be better able to telecommute if they were able to access large data sets and/or graphic/video applications from home apartment complexes and condominium units. As schedule 3.4 illustrates, the Chapel Hill and Carrboro community include UNC and UNC Healthcare off-campus facilities, local businesses, public schools, UNC Healthcare physicians, multi-family complexes and apartment complexes and condominium units. We anticipate that the demand for ultra high-speed access to these facilities will be significant.


Population Density for Chapel Hill - Carrboro
Chapel Hill
Carrboro
N
Legend:
Population Density
(People per Acre)
0.0 - 2.5
2.6 - 8.2
8.3- 18.0
18.1 - 36.2
36.3 - 81.9
THIS MAP IS NOT A CERTIFIED SURVEY NO RELIANCE MAY BE PLACED IN ITS ACCURACY
The Town of Carrboro assumes no liablility for damages caused by inaccuracies in this map or supporting data and makes no warranty, expressed or implied, as to the accuracy of the information presented. The fact of distribution does not consitute such a warranty.
TOWN OF CARRBORO
301 W. Main St.
Carrboro, NC 27510
Updated October, 2012

UNC Health Care System. UNC is actively engaged in telemedicine and facilitating wellness programs that reach out to individuals through a growing number of digital medical devices, such as diabetic testing equipment linked directly to an individual's electronic medical record. Access to Gigabit speeds will be valuable to the more than 660 physicians located through the Towns' borders, for off-site consultations and easy uploading and downloading of dense medical images and files. In addition, of special interest are services to the aging, such as home-monitoring systems, that will allow them to maintain their independence and ability to live at home longer.

Schedule 3.2

Chapel Hill and Carrboro Fiber Assets, Conduit, Additional Networks, Poles, and Facilities Available to the Vendor(s), including Fees and Mechanism for Availability


Chapel Hill - Carrboro Fiber Optic Cable Paths
Chapel Hill
Carrboro
N
Legend:
Carrboro Fiber
Chapel Hill Fiber
THIS MAP IS NOT A CERTIFIED SURVEY NO RELIANCE MAY BE PLACED IN ITS ACCURACY
The Town of Carrboro assumes no liablility for damages caused by inaccuracies in this map or supporting data and makes no warranty, expressed or implied, as to the accuracy of the information presented. The fact of distribution does not consitute such a warranty.
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Carrboro, NC 27510
Updated October, 2012

The Towns of Chapel Hill and Carrboro have approximately 46 miles of fiber-optic cabling assets as denoted on the above map. Both Towns intend to negotiate the lease price and term of dark fiber strands and the number of fiber strands available to a potential Vendor(s).

Backhaul

The University of North Carolina at Chapel Hill (UNC Chapel Hill) is a peering point for MCNC, an independent non-profit that manages the North Carolina Research and Education Network (NCREN), provides Internet services for education, health, and governmental customers; its extensive assets are also available to commercial customers at very competitive rates. UNC Chapel Hill maintains a point of presence for NCREN and is willing to facilitate a successful respondent’s use of that POP if desired.

Other Community Fiber Assets

The Chapel Hill Carrboro School system has deployed some fiber assets in Chapel Hill in an area not currently covered by the town’s fiber ring. The school system is willing to negotiate the lease/use of some strands of this fiber to respondents as part of the backbone of a proposed network. The Orange Water and Sewer Authority (OWASA) is also willing to negotiate a flat fee, 5 year lease of antenna space on one or more of their three (3) water tanks located within the Chapel Hill/Carrboro city limits.

Peering/Carrier Hotels

UNC Chapel Hill provides rack space and power for several commercials carriers in each of their three data centers. The University is willing to negotiate use of space in its data centers for a respondent’s peering with commercial providers or other carriers who maintain POPs on campus. The Chapel Hill/Carrboro Chamber of Commerce will facilitate conversations between successful respondents and local data center owners as to use of facilities within the community for peering with other communications vendors.

Pole Attachments

Neither Chapel Hill nor Carrboro own or control any telecommunications or electrical utility services. Pole attachments may be negotiable with Duke Energy and in some areas of Carrboro, with Piedmont Electric Cooperative.

Schedule 3.3

Chapel Hill and Carrboro Low-income Neighborhoods Map

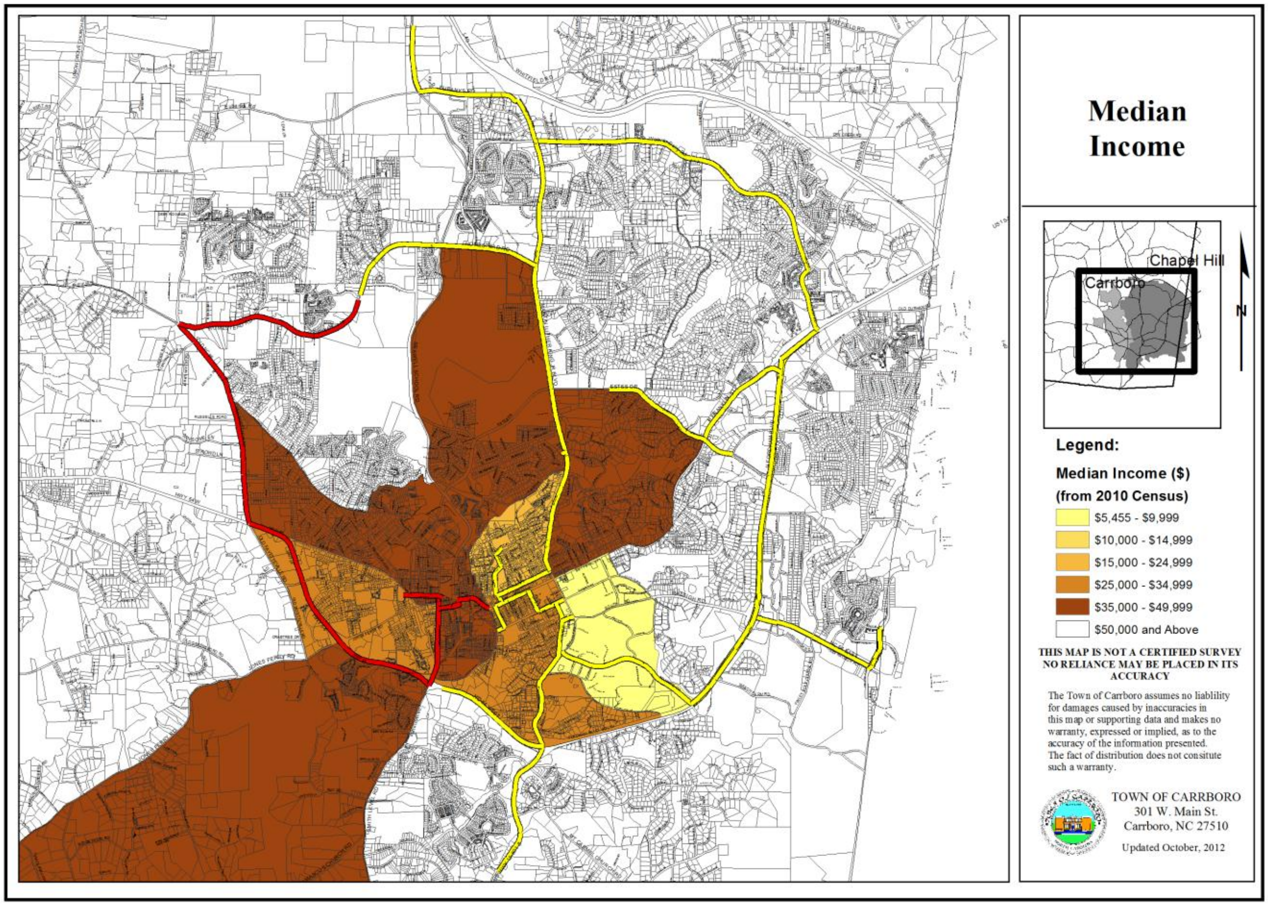
Access to modern broadband services is now essential to participate in modern life. Lack of online access limits educational opportunities, health care options, public safety coverage, economic choices and job availability (FCC Chairman Genachowski). Additionally, the level of a community's access to advanced broadband infrastructure is determining whether its businesses, students and residents will be able to compete in this global economy.

While a person or a community's place in society is being determined by whether they are a digital-have or have-not, there is a stark digital divide developing along income and demographic lines. In the Eighth Broadband Progress Report, the FCC reports that areas of the community that are not being served with the level of broadband necessary to participate in modern life (i.e., 4Mpbs/1Mpbs) tend to have lower median household incomes, a higher proportion of the population living in poverty, and less college-education than areas that are served. The National Telecommunications and Information Administration, in its October 2011 Digital Nation study, reported that demographic and geographic disparities demonstrate a persistent digital divide among certain groups: "Households with lower incomes and less education, as well as Blacks, Hispanics, people with disabilities, and rural residents were less likely to have home Internet access service." Less than half (43%) of all households with annual household incomes below $25,000 in 2010 reported having broadband Internet access at home, compared with the vast majority (93%) of households with incomes exceeding $100,000. Across all income levels, Hispanics were less likely than White non-Hispanics to have adopted broadband.

For Chapel Hill and Carrboro, broadband access for the economically disadvantaged is a central concern. Chapel Hill and Carrboro need to ensure that the use of the Town's existing fiber ring is leveraged to reduce the community's digital divide.

The provided Median Income map displays data taken from the 2010 U.S. Census and is income in the past 12 months (in 2010 inflation-adjusted dollars).

Table 3.1 – Median Income from 2010 U.S. Census Data



THIS MAP IS NOT A CERTIFIED SURVEY
NO RELIANCE MAY BE PLACED IN ITS
ACCURACY

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TOWN OF CARRBORO
301 W. Main St.
Carrboro, NC 27510

Updated October, 2012

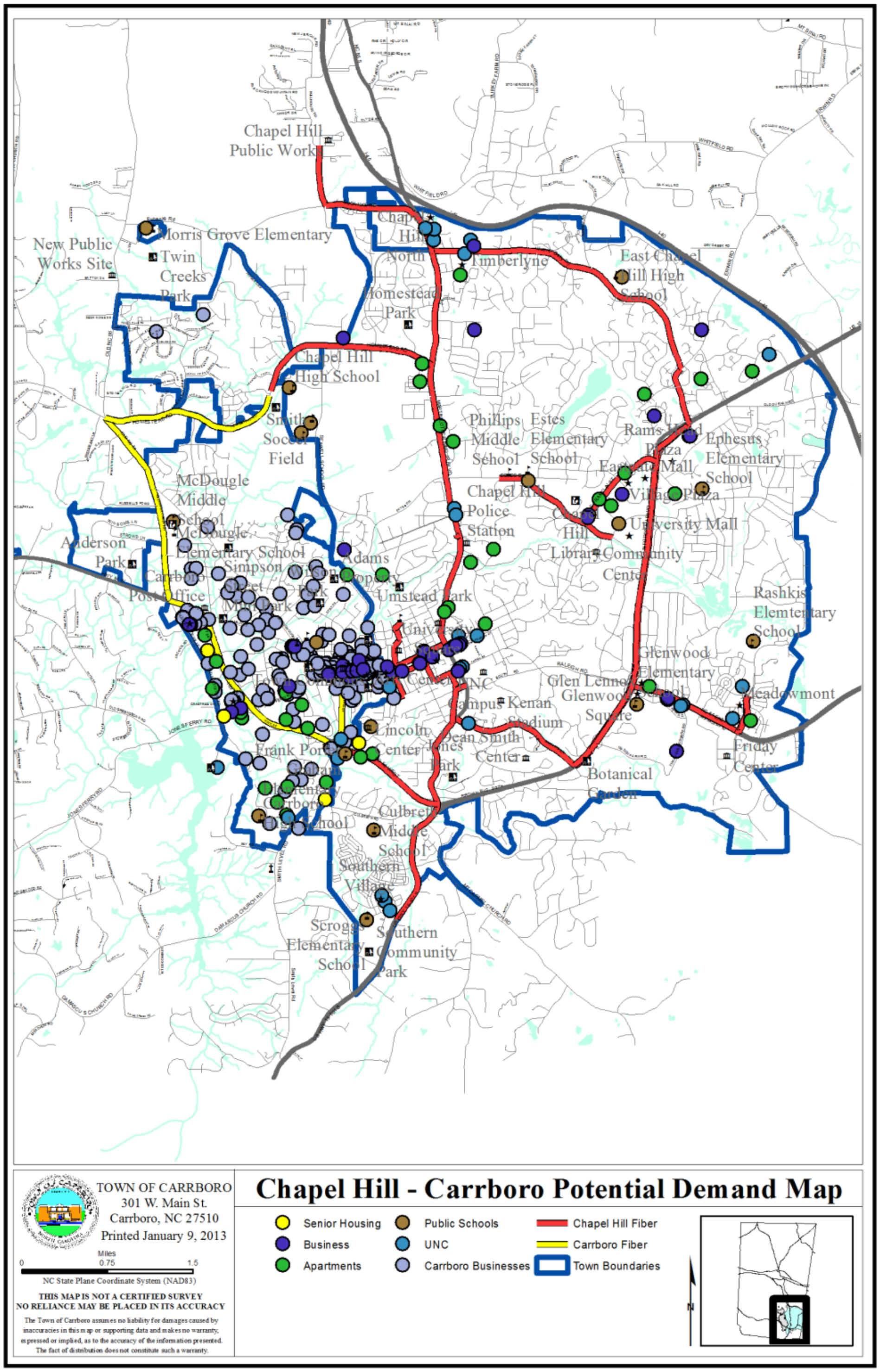
Schedule 3.4

Chapel Hill and Carrboro Demand Maps

A survey was created to gather information from local business owners about the type of Internet access they were currently purchasing and the level of access they would like to have. The survey was distributed to local businesses by the Chapel Hill/Carrboro Chamber of Commerce, property managers of three large mixed use communities and the Town of Carrboro’s Economic and Community Development Department. Responses to the survey confirmed an interest in higher speed broadband access among businesses in the downtown Chapel Hill/Carrboro areas. Another area of potential demand is the cluster of multi-family housing along Hwy 54 between Chapel Hill and Carrboro.

We have determined that there are approximately 660 UNC Healthcare physicians living within the town limits of Chapel Hill and Carrboro. In this community, there is a great potential for use of telehealth applications. We expect that a substantial number of these individuals would become enthusiastic subscribers to a new service—if the monthly fee is realistic.

A mapping of the potential demand for next generation broadband for Chapel Hill and Carrboro included here identifies multi-family complexes, UNC and UNC Healthcare off-campus facilities, local businesses and public schools.


Chapel Hill Public Works
New Public Works Site
Morris Grove Elementary
Twin Creeks Park
Chapel Hill North
Timberlyne
East Chapel Hill High School
Homestead Park
Chapel Hill High School
Smith Soccer Field
Phillips Middle School
Estes Elementary School
Rams Head Plaza
Ephesus Elementary School
Eastgate Mall
Village Plaza
University Mall
Chapel Hill Police Station
Chapel Hill Library
Community Center
McDougle Middle School
McDougle Elementary School
Anderson Park
Carrboro Post Office
Simpson Street Park
Adams Property
Umstead Park
University
UNC Campus
Kenan Stadium
Dean Smith Center
Rashkis Elemtentary School
Glenwood Elementary School
Glen Lennox
Glenwood Square
Meadowmont
Friday Center
Botanical Garden
Lincoln Center
Jones Park
Frank Porter Graham
Carrboro Elementary School
Culbreth Middle School
Southern Village
Scroggs Elementary School
Southern Community Park
TOWN OF CARRBORO
301 W. Main St.
Carrboro, NC 27510
Printed January 9, 2013
Miles
0
0.75
1.5
NC State Plane Coordinate System (NAD83)
THIS MAP IS NOT A CERTIFIED SURVEY
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The Town of Carrboro assumes no liability for damages caused by inaccuracies in this map or supporting data and makes no warranty, expressed or implied, as to the accuracy of the information presented. The fact of distribution does not constitute such a warranty.
Chapel Hill - Carrboro Potential Demand Map
Senior Housing
Business
Apartments
Public Schools
UNC
Carrboro Businesses
Chapel Hill Fiber
Carrboro Fiber
Town Boundaries
N

Schedule 4.1

City of Durham Introduction

Founded after the Civil War and unencumbered by Southern antebellum strictures, Durham was one of the first industrialized cities in the southeast and boomed in the late nineteenth and early twentieth centuries due to a culture of innovation and discovery. As Durham's industrial output shifted from tobacco and textiles to semiconductors and telephony to medical research, bio/pharma, software and high-tech, the community has long supported start-up companies and entrepreneurial ventures.

Durham is the fifth-largest city in North Carolina yet is situated in the seventeenth-smallest county in the state, providing a mix of urban, suburban and rural development styles in a relatively contained area. Durham also has a racial and socioeconomic diversity that is very unusual for twenty-first century American communities. There is no single racial majority, as African-American, white, Latino, Asian and other communities each playing a role in the community fabric Durham serves to represent broader communities. Finally, Durham has an outsized, highly-educated workforce that ranks the city/MSA near the top of many "creative class" and knowledge worker metrics. Taken as a whole, these factors make Durham an ideal site for piloting new broadband approaches.

Within the city itself, downtown is less than two miles from Duke and four miles from RTP's northern boundary. The world-renowned Duke Medicine hospital/clinic campus is next to Duke, while North Carolina Central University and Durham Tech are situated between RTP and downtown. All of Durham's higher education sites are connected to the statewide research and education network (MCNC's NCREN).

Durham is part of the Research Triangle region, a renowned region centered on the Durham-centered Research Triangle Park (RTP), a center for life sciences and technology. Within the boundaries of RTP are many well-known employers and institutions including IBM, Cisco, GlaxoSmithKline, EMC, NetApp, and Quintiles. In addition, Durham is home to a large number of start-up companies, including a growing nexus of accessible office space and complementary businesses downtown. Startups employ over 600 people downtown, which is also home to firms specializing in venture capital, startup banking and social entrepreneurship.

Durham is also home to Duke University and its medical center, a top-ranked global university with major research programs in areas including technology, health care and the life sciences. Duke is one of the top ten universities for total research dollars (over

$650 million in 2006), with more than 3,000 tenured, tenure-track or regular rank faculty. In addition, Duke University Hospital is an academic medical center and is a major center for research and biomedical study in addition to education and patient care.

Community Goals For Network

Durham's stakeholders seek responses that would provide fiber to the premises or equivalent service and gigabit network speeds for areas where committed or likely high demand exists. We are seeking respondents interested in serving commercial/business customers, residential (neighborhood and MDU), and institutional users. Durham primarily seeks respondents to offer Internet/data service to customers over the proposed network with gigabit synchronous speeds. Respondents may choose to propose offering additional communications services (e.g., video) subject to any state or local regulatory or franchising requirements. For commercial customers, the respondent should outline the nature of its offerings to commercial landlords who might make such service available for some or all tenants, as well as for service offerings where the individual tenant is the customer.

As noted in the section below, certain university and governmental assets may be available for use or lease to facilitate a network backbone and peering/upstream Internet connectivity. We would expect respondents to make use of these assets to opportunistically link to areas of likely or possible demand that are adjacent to same. Respondents are also encouraged to propose approaches to providing service in areas that assets do not reach today.

Durham presents a range of use cases and points of initial high demand for the proposed solution:

Neighborhoods and urban areas adjacent to downtown and the urban core have a large number of multiple dwelling unit (MDU) complexes and single-family housing areas whose residents are affiliated with local universities and hospitals. They would find remote work and workplace connectivity benefits from the proposed solution.

Duke Medicine serves almost four out of five Durham residents. The high concentration of Duke-managed medical facilities in Durham – including two hospitals, private practice general medicine outlets, specialists, and free community clinics in impoverished neighborhoods – provides a unique opportunity for advancing the efforts in video-based collaboration and telemedicine.

Several of Durham's large employers inside and outside of RTP perform data-driven work (including basic and applied sciences, biotech/pharma and software/ technology) that demands high levels of broadband access. Many of these enterprises are interested in improving their connectivity. At least one employer has strongly suggested it would explore telecommuting options to increase productivity, and save on transportation and office space costs if its employees could use a Gig.U-style network from home. In addition, many startups are clustered in leased office and incubator space downtown whose landlords could provide a single point of negotiation and access for Gig.U networking service.

Durham's areas of targeted demand and areas of focused economic investment dovetail with Duke University existing and future fiber assets; backhaul service access points at Duke (and other institutions) to the MCNC NCREN network; and future transit corridor locations where high MDU growth is expected.

Schedule 4.2

City of Durham Fiber Assets, Conduit, Additional Networks, Poles and Facilities Available to the Vendor(s), including Fees and Mechanisms for Availability

Backhaul

Duke University is a peering point for MCNC, whose North Carolina Research and Education Network (NCREN) provides Internet services for education and governmental customers; its extensive assets are also available to commercial customers at very competitive rates. Duke University maintains a point of presence for NCREN on the Duke West Campus and is willing to facilitate a successful respondent's use of that POP (located in the Tel-Com Bldg., 2 Telecom Dr., Durham NC 27708) if desired. Additionally, Duke is currently working to increase the capacity of fiber assets connecting campus locations to Duke's MCNC backhaul point and will negotiate on providing campus fiber capacity to connect a successful respondent to our MCNC peering point.

Existing Limited Fiber Ring

In 2005, Duke University leased fiber assets for 25 years to build a ring connecting downtown Durham, the Main St. corridor/Erwin Square area, Central Campus, and the south-central Durham neighborhoods. (See diagram below for the approximate location of the assets and demarcation points.) There are two strands of fiber on the majority of the ring, both in use by Duke; the university would be willing to negotiate to allow a respondent to make use of the fiber through wave division multiplexing, which would require Duke to upgrade some university network equipment. Some portions of the ring shown in diagrams below have six strands, of which two would be available for dedicated use by respondents. These strands are leased through a telecommunications provider and Duke would be providing access to the successful respondent as our customer. Duke is willing to facilitate conversations on use of demarcation sites at non-Duke-owned facilities that are part of this ring.

Major Proposed Fiber Rings

Duke is currently considering a project to extend new fiber rings with more than 24 strands to both the South Square area (University Tower) and to north Durham (Durham Regional Hospital). (See diagram below for the proposed location of these rings.) These rings run adjacent to many of the areas of high demand and strategic importance listed in the previous section. The project could go to construction in the near future, subject to budgeting, permitting and regulatory approval, and capital project/trustee approval. Although these rings are currently planned to be direct routes without demarcation points to Duke's campus, Duke would be open to co-building the project with a respondent who was seeking to bring next-generation speeds to local neighborhoods and businesses, with respondent paying costs for additional capacity added or the addition of intermediate demarcation points.

Other Community Fiber Assets

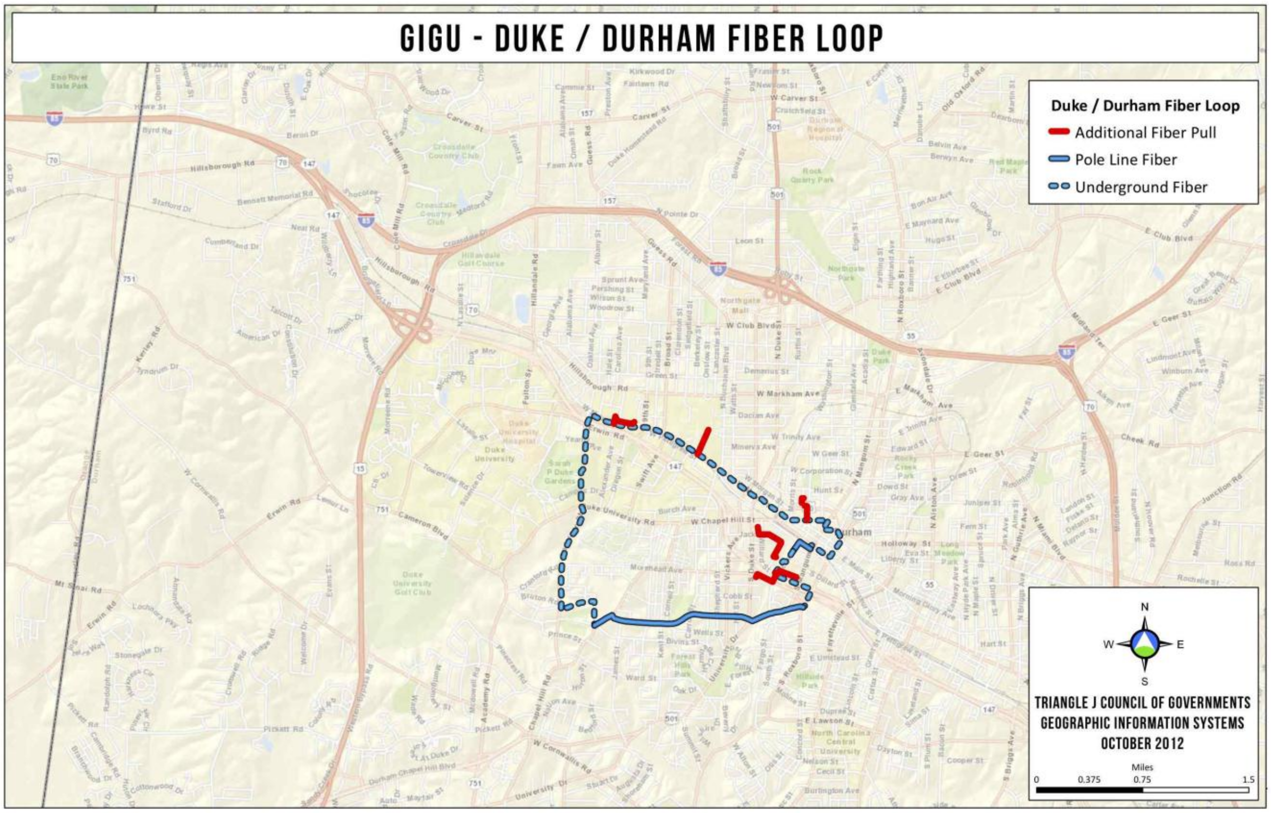
Durham County has deployed some fiber assets in downtown as part of capital project plans to interconnect judicial and governmental facilities. The County is willing to negotiate the lease/use of some strands of this fiber to respondents as part of the backbone of a proposed network. The City of Durham does not have relevant fiber assets available for use but is negotiating with another entity for intergovernmental access to fiber for municipal purposes. Should those negotiations reach a successful conclusion, the City of Durham is willing to provide more information on terms of use, if any, of such assets by a respondent.

Peering/Carrier Hotels

Although Duke's main peering arrangement today is with MCNC/NCREN, the POP located within the Tel-Com Bldg. on West Campus has historically provided meet-me facilities for LECs such as Level 3, Verizon/Frontier and other providers. Duke is willing to negotiate use of our POP for a respondent's peering with such providers or other carriers. In addition, Durham is home to a disproportionate number of data center facilities, both existing and under construction, with one of the largest East Coast concentrations of such centers existing in and around Research Triangle Park. The Greater Durham Chamber of Commerce will facilitate conversations between successful respondents and local data center owners as to use of facilities within the community for peering with other communications vendors.

Pole Attachments

The municipality does not own or control any telecommunications or electrical utility services. Pole attachments may be negotiable with Duke Energy. The single point of contact identified will facilitate connecting the successful respondent with the appropriate pole attachment process.


GIGU - DUKE / DURHAM FIBER LOOP
Duke / Durham Fiber Loop
Additional Fiber Pull
Pole Line Fiber
Underground Fiber
N
W
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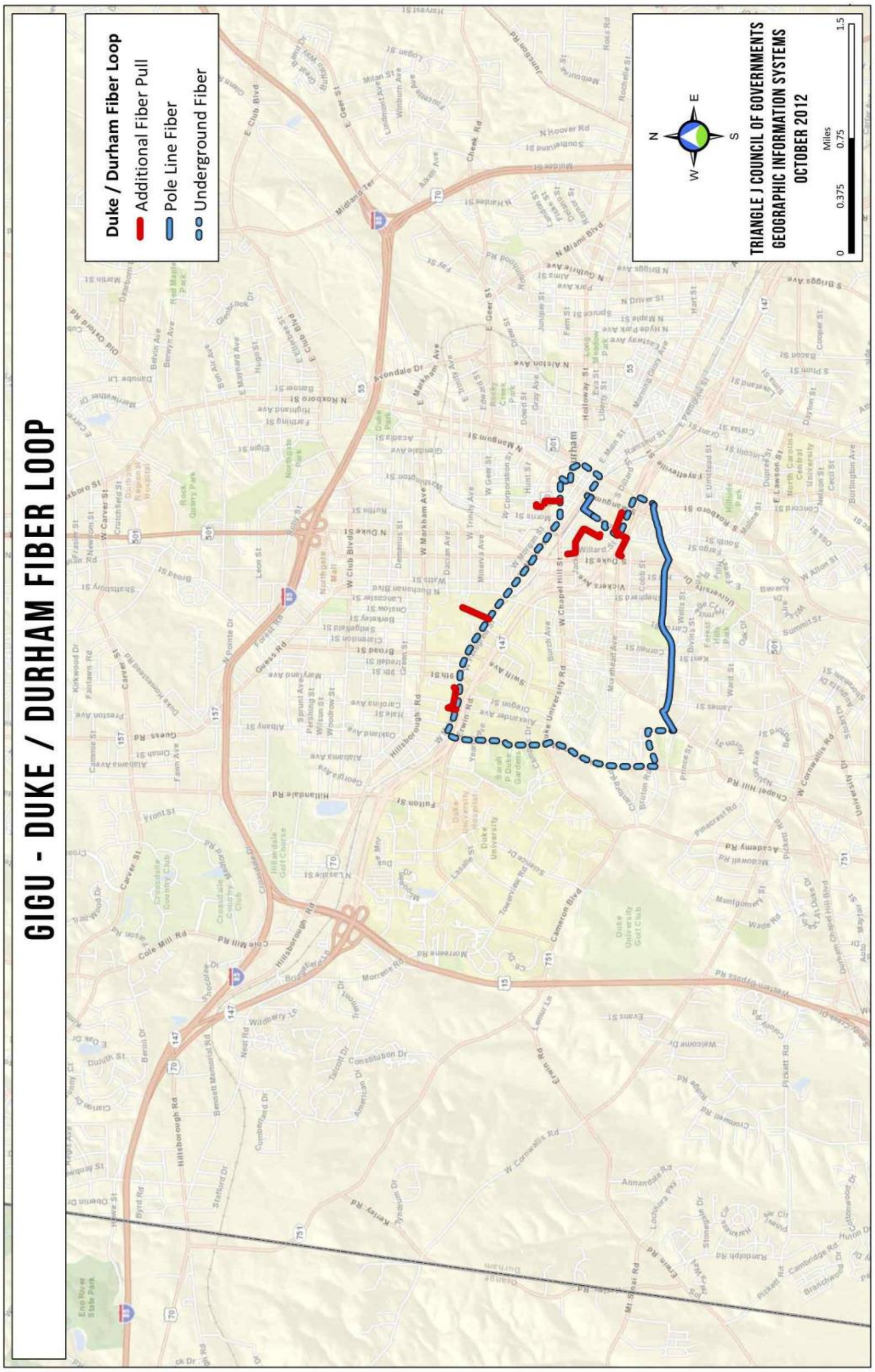
TRIANGLE J COUNCIL OF GOVERNMENTS
GEOGRAPHIC INFORMATION SYSTEMS
OCTOBER 2012
Miles
0
0.375
0.75
1.5
Duke University
Duke University Hospital
Durham
Duke University Golf Club
North Carolina Central University
Northgate Mall
W Chapel Hill St
Duke University Rd
Hillsborough Rd
Erwin Rd
W Markham Ave
Morehead Ave
Cornwallis Rd



GIGU - DUKE / DURHAM FIBER LOOP

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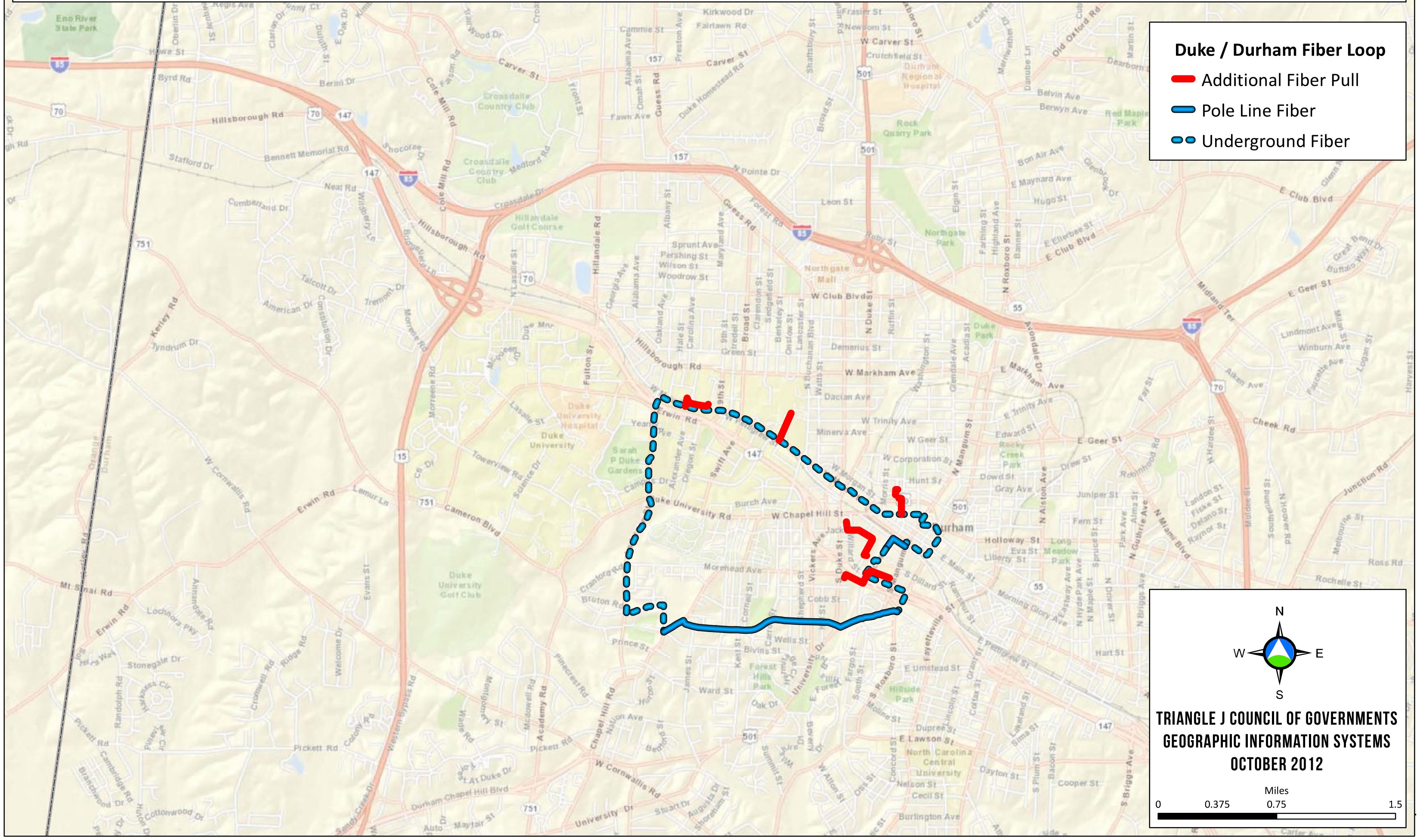
GEOGRAPHIC INFORMATION SYSTEMS
OCTOBER 2012

GIGU - DUKE / DURHAM FIBER LOOP



Schedule 4.3

City of Durham Fiber Master Permit for Right of Way Agreement, Encroachment Agreement or Franchise Agreement

Internet services do not require local City franchise agreements. Depending on the services to be offered by the respondent, a state franchise through the Secretary of State's office may be required.

The City of Durham is willing to negotiate a Master Right of Way agreement to facilitate access to implement the networking infrastructure required for this project. In addition, the City is willing to negotiate with respondent over permit review and inspection services including expedited service offerings to support the build-out of the proposed network. The City is willing to negotiate rights for open trenching construction methods where appropriate.

Schedule 4.4

City of Durham Low-income Neighborhoods

We would expect the primary focus of the network to be on customers willing to pay market-based subscription rates. Market rates should reflect a competitive open economy for broadband, providing price points seen in bandwidth-advantaged communities globally. Respondents are encouraged to consider opportunities to serve community anchor institutions, such as schools and community centers; to propose wireless “last mile” solutions to residences/MDUs and surrounding businesses; and to provide some level of service to areas that do not currently exhibit demand for gigabit speeds.

The recommended Phase One and Phase Two areas of likely high demand and greater density (outlined in Schedule 4.5) includes low income households and should receive consideration.

Schedule 4.5

City of Durham Demand and Maps

Known Demand and Incentives

Although respondents are encouraged to consider the entire city/county area for initial phases of a Gig.U network, local officials would recommend an initial deployment target several **Phase One** areas of likely high demand and greater density. These areas all are targeted for commercial and economic development by the City of Durham; in addition, all except Research Triangle Park sit within the corridor for a planned light rail system to connect Durham and Chapel Hill, which should drive significant increases in dense, multifamily development.

- The **Downtown Durham** district has more than 14,000 employees in commercial, public sector, health care and research positions, and is home to a significant volume of Class A/Class B office space, incubators for start-up ventures, life science labs, and busy public facilities (performing arts centers, athletic stadiums.) Downtown has drawn more than $1 billion in private/public investment in the past fifteen years, including the 1 million sq. ft.+ American Tobacco redevelopment, and several hundred units of additional upscale apartments are proposed along the Chapel Hill Rd. and Foster St. corridors. Downtown contains significant existing fiber assets and is proximate to Duke and its MCNC/NCREN interconnectivity.
- The **Main St./Ninth St./Erwin Rd.** corridor sits between Duke's East and West Campuses and downtown and includes a number of large multiple dwelling unit (MDU) apartment buildings including West Village, Lofts at Lakeview, Erwin Terrace, Station Nine and Circle Ninth Street (under construction), with additional projects proposed along the corridor and with smaller office/retail complexes and dense residential neighborhoods with high populations of university-affiliated students and staff in the vicinity. Duke University's existing fiber assets connect downtown to the campus with several demarcation stops at locations in this area. More than 550,000 sq. ft. of leasable office space exists in this area
- **North Carolina Central University (NCCU)** in southeast central Durham presents another interconnection node to MCNC/NCREN and is adjacent to the Alston Ave. and Fayetteville Rd. corridors, which are targets for ongoing city investment and economic development. NCCU presents natural spillover opportunities for campus and spin-out activities alongside its dense campus, and is proximate to Durham Technical Community College, one of the largest community colleges in the state of North Carolina. The City of Durham is also investing significantly in the reconstruction of the Rolling Hills/Southside district

between NCCU and downtown Durham, and several completed (Golden Belt) and proposed projects for MDUs and commercial space exist in this vicinity.

- **South Square** represents a major opportunity for commercial and residential development. The district, which surrounds a former superregional shopping center, includes more than 400,000 sq. ft. of leasable Class A/B office space along with a large redevelopment site (University Marketplace) that has recently received economic development incentives. A number of MDUs and a major operations center for Blue Cross Blue Shield of NC are located in this vicinity at the University Dr./US 15-501 intersection. Duke is contemplating an extension of its fiber optic network to the University Tower skyscraper in this area, and would negotiate with successful respondents to jointly build out Gig.U and university connectivity to provide a beachhead in the South Square area.
- Finally, commercial office spaces in **Research Triangle Park** present opportunities to connect large corporate office parks with strong demand for bandwidth for scientific, technical and biomedical/life sciences work. More than 40,000 people work in RTP at corporations including GlaxoSmithKline and Quintiles (US headquarters); IBM and Cisco (largest employment sites outside their headquarters); established firms such as EMC, NetApp and Biogen Idec; and innovative, research-heavy firms like Syngenta, Semprius and Cree. RTP is rich in privately-held fiber assets and is the headquarters of MCNC, making for possible peering options.

Less immediately commercially viable but worthy for consideration in a **Phase Two** build-out if not today are three additional focal areas:

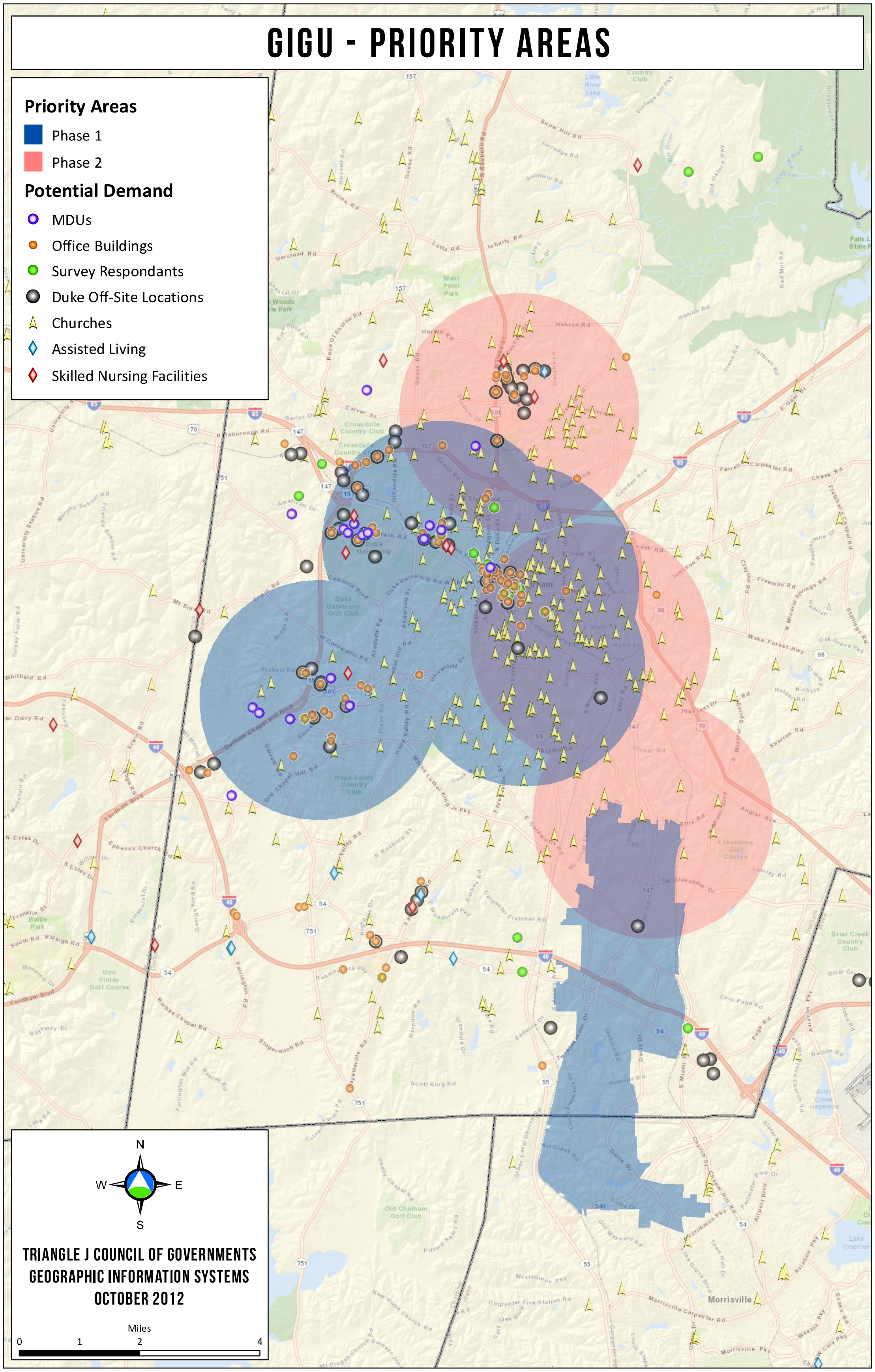
- The **Durham Regional Hospital** area of North Durham is a candidate for future Duke fiber optic expansion to support healthcare and data needs; coordinated build-out of a Gig.U backbone with the campus/health system's needs is negotiable. Adjacent to Durham Regional are more than 400,000 sq. ft. of Class B commercial office space, much of which may find itself in use for medical facilities; Duke and other interests including many medical complexes also lease significant space in the nearby Independence Park complex. The 1-2 mile radius around Durham Regional has significant opportunities for job growth and redevelopment in data-driven medical job fields.
- The **Angier/Driver corridor** in East Durham is an historic neighborhood-commercial district that is a concentrated area for city investment, including streetscape reconstruction in the heart of the district. Such street reconstruction and beautification could be coordinated to provide conduits or other access for future fiber optic network construction. This area provides a services backbone for an economically distressed community and is the site of significant investment in community health care and educational facilities such as the recently-opened Holton School and Maureen Joy Charter School.

- The **Ellis Road** interchange off of NC 147 (Durham Freeway) is one of the most promising areas for greenfield development in Durham County, sitting immediately between downtown Durham and Research Triangle Park. NCDOT efforts to interconnect the Durham Freeway and I-85/US 70 (the East End Connector) will increase vehicular access to the area, while the proximity to employer sites like IBM and GlaxoSmithKline make this area a natural target for dense residential, commercial and research/scientific development.

Durham has been conducting surveys of local businesses and other stakeholders to determine their interest in Gig.U speeds, and has been gathering data on the locations of office buildings and MDUs that would be likely targets for marketing and delivering Gig.U services. A visualization of those data overlaid against the proposed Phase One and Phase Two zones appear in the diagram below. Additionally, we expect to participate in Gig.U's national-level Upgrade Your Community survey project this fall to garner localized/neighborhood and business level interest, and will share those results with respondents upon completion.

Durham's major employment centers provide an additional strong driver for Gig.U service demand. Data on Durham County job centers by employment volumes can be found in the diagrams below.

GIGU - PRIORITY AREAS



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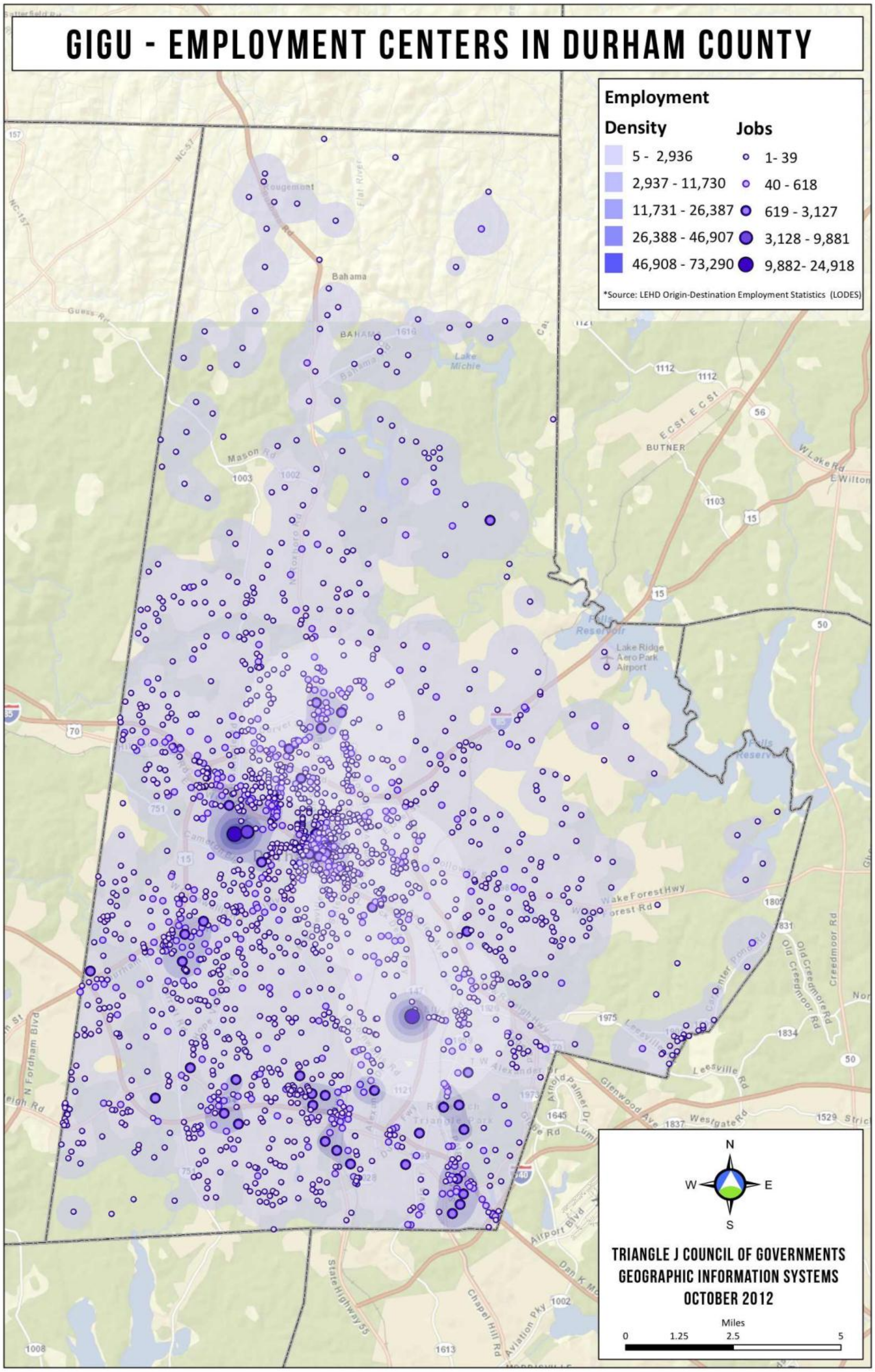
GEOGRAPHIC INFORMATION SYSTEMS
OCTOBER 2012


GIGU - EMPLOYMENT CENTERS IN DURHAM COUNTY
Employment
Density
Jobs
5 - 2,936
2,937 - 11,730
11,731 - 26,387
26,388 - 46,907
46,908 - 73,290
1- 39
40 - 618
619 - 3,127
3,128 - 9,881
9,882- 24,918
*Source: LEHD Origin-Destination Employment Statistics (LODES)
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TRIANGLE J COUNCIL OF GOVERNMENTS
GEOGRAPHIC INFORMATION SYSTEMS
OCTOBER 2012
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2.5
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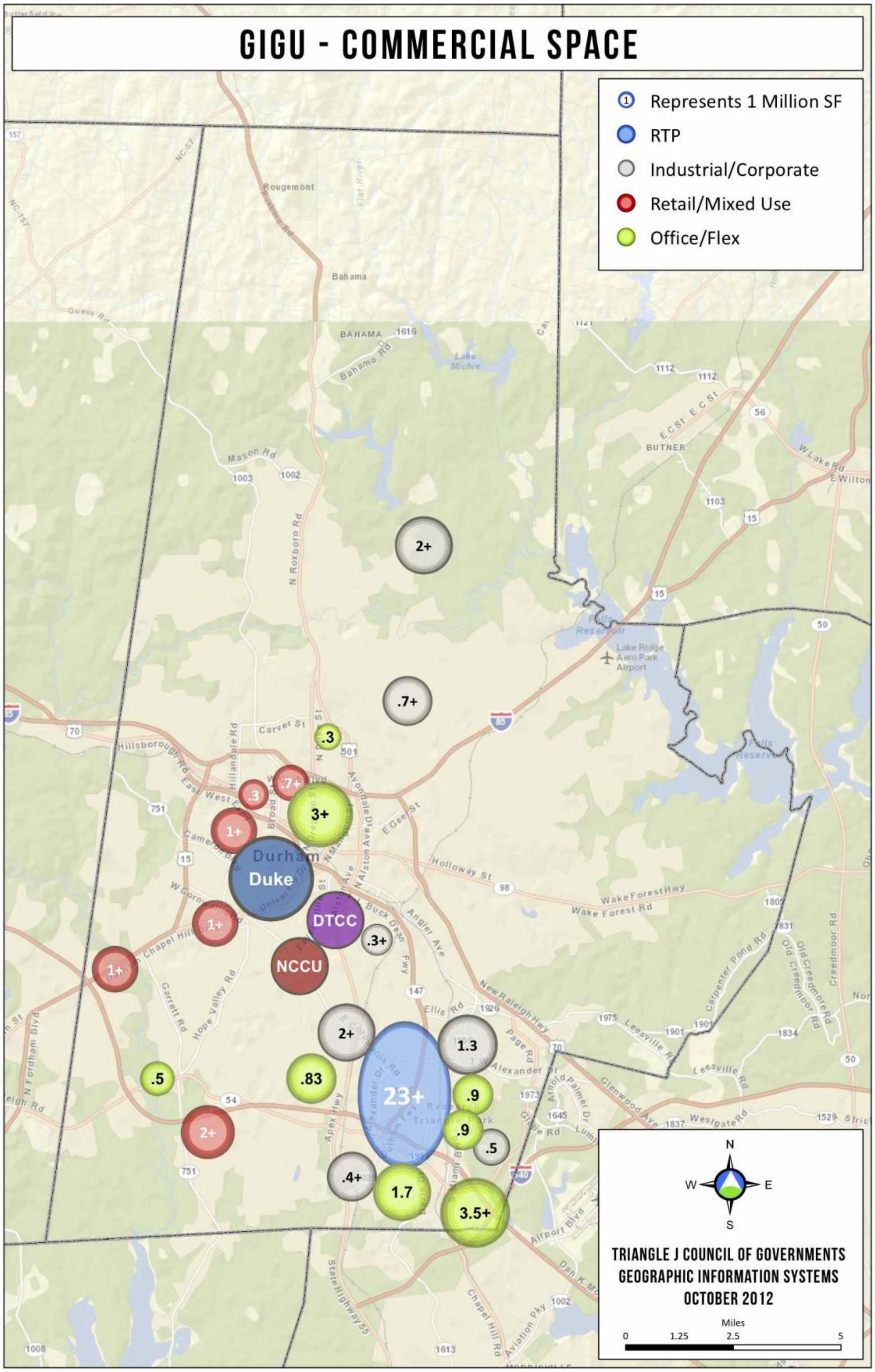
Rougemont
Bahama
Lake Michie
BUTNER
Falls Reservoir
Lake Ridge Aero Park Airport
Mason Rd
Wake Forest Hwy
Leesville Rd
Glenwood Ave
Westgate Rd
Creedmoor Rd
Old Creedmoor Rd
W Lake Rd
E Wilton
Airport Blvd
Aviation Pky
Chapel Hill Rd
State Highway 55
N Fordham Blvd
Triangle Park


GIGU - COMMERCIAL SPACE
① Represents 1 Million SF
● RTP
○ Industrial/Corporate
● Retail/Mixed Use
● Office/Flex
2+
.7+
.3
.7+
.3
3+
1+
Durham
Duke
1+
DTCC
.3+
NCCU
1+
2+
1.3
.5
.83
23+
.9
.9
.5
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.4+
1.7
3.5+
Rougemont
Bahama
Lake Michie
Butner
Falls Reservoir
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GEOGRAPHIC INFORMATION SYSTEMS
OCTOBER 2012
Miles
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5

Schedule 4.6

Additional Assets To Be Provided To Vendor

Local municipalities and other government entities (including K-12 schools) currently receive Internet service through leased providers. These services are ordinarily procured through an open bid process where all providers may respond. There is no commitment from any government agency to use a successful respondent's service; however, the presence of the successful respondent in the marketplace, as with any new entrant, provides a rationale to rebid current service agreements at the first contractually-allowed opportunity.

Many of the areas of likely high demand and of asset availability fall into locals where significant public and private investment have been made and may in the future be available. Much of central Durham, including downtown and areas near local universities/hospitals, along with the South Square area fall into economic progress priority zones established by the city as part of a state economic development program. Additionally, public and private investments in the downtown area have exceeded $1 billion in recent years. And areas adjacent to downtown have seen a significant influx in lab and research space, residential units, income and employment. No economic incentives are contemplated or offered by Durham government at this time and would require further discussion if requested by any respondent.

Schedule 4.7

Local and Institutional Requirements to Which the Vendor(s) Are Subject

Municipal Facilities

Municipal property (including owned buildings' interior or roofs, telecommunication closets, data center space, land, exterior space on water towers, office space, etc.) may be negotiable for lease or use by a respondent for demarcation/point of presence locations, vaults/pull boxes, server hosting, or other service elements. Respondents should state their interest in using such facilities to determine the precise need, availability and terms of use, which are available through the municipal real estate office.

Municipal Practices

The City will provide a designated, single point of contact to a successful respondent to assist them in coordinating conversations with utilities, community stakeholders including prospective customers or partners, and to assist with marketing this effort. There will be no charge levied for this resource.

Schedule 5.1

City of Raleigh Introduction

Raleigh is the capital and the second largest city in the state of North Carolina as well as the seat of Wake County. Raleigh's 2011 estimated population was 416,468, over an area of 142.8 square miles, placing Raleigh as the 42nd largest city in the United States. It is also one of the fastest-growing cities in the country.

Raleigh is home to North Carolina State University, William Peace University, Meredith College, Wake Technical Community College campuses, and two historically black universities—Saint Augustine's and Shaw. Among its many attributes, Raleigh has hundreds of restaurants, bars and approximately 10 museums. Raleigh hosts outstanding concerts, dance performances, the North Carolina Theatre and the opera. Raleigh has a thriving social scene, coupled with great schools and 12,512 acres of parks.

Raleigh is one of the three primary cities in the Research Triangle metropolitan region. We have a quality of life that has landed Raleigh and the communities that make up the Research Triangle region of North Carolina among the nation's best places to live, start a business, raise a family, and earn a world-class education.

In 2011 Red Hat, the world's open source technology leader, announced plans to relocate their headquarters to downtown Raleigh. Citrix, provider of market-leading cloud, collaboration, networking and virtualization technologies, will move its North Carolina offices to an ultra-modern 130,000 square-foot office space in the warehouse district of downtown Raleigh. The facility will become the new development center for the data sharing product group, which is expected to more than double in size over the next five years. This follows North Carolina's announcement of Citrix's plans to create 337 jobs and invest $12.5 million in North Carolina. The Citrix move is anticipated in 2013.

Community Commitment/Participation

Six years ago, the City of Raleigh Information Technology Department was focused on establishing a standard network topology and evolving its network to align with internal and external business objectives. The first step was to develop a fiber optic ring around downtown. This ring connected the municipal complex, community centers, the convention center and the performing arts center. In partnership with downtown business groups, Raleigh launched a broadband wireless network to provide free Wi-Fi service to the downtown center city. The downtown Wi-Fi network offers free wireless access in public outdoor spaces to thousands of downtown visitors and shop patrons. At outdoor functions and festivals, small business vendors can use the network to conduct credit card transactions. Raleigh's free Wi-Fi has been important to bringing people downtown and attracting more conferences to the convention center.

Raleigh's technology infrastructure helps make city government more efficient. However, the goal is much greater. The City of Raleigh seeks to promote economic growth across the city through workforce training and enabling widespread Internet access. After moving to integrate technology and revitalize the downtown area through technology, the next step was to facilitate the provision of Internet access to low-income families. In 2009, the City of Raleigh partnered with One Economy Corporation and the Raleigh Housing Authority to bring broadband Internet access, through a private ISP, and computer training to residents in two low-income communities in Raleigh. Today, through a Broadband Technology Opportunities Program (BTOP) grant, One Economy and Raleigh, through a private ISP, are continuing to connect 1,192 additional low-income homes throughout the city by 2013.

In addition to providing broadband Internet access, the City of Raleigh is providing One Economy's nationally renowned Digital Connectors program. The program provides technology and leadership training to young people, age 14 through 21. Young people are key assets for Raleigh to continue as a national leader in high-tech innovation. Each Digital Connector commits to 56 hours of community service and receives 150 hours of classroom instruction through the academic school year. Raleigh has 59 Digital Connectors alumni and 16 more students are enrolled in the 2013 Digital Connectors class. Raleigh established a Community Advisory Board to provide the City with input and guidance on community digital literacy and the Digital Connectors program.

The City of Raleigh is committed to establishing and nurturing partnerships focused on developing Raleigh's economy and position as a world-class 21st century city.

- Recently, Raleigh hosted a symposium with individuals from like-minded organizations to discuss ways to support Raleigh's innovation and economic sustainability through a broadband and technology ecosystem.
- In 2011 and 2012, Raleigh residents and civic leaders participated in CityCamp. CityCamp is a 3-day conference that brings together government, business, non-profit and academic communities for workshops and hands-on problem solving to impact the way technology and participation will shape Raleigh's future.
- The City of Raleigh, the Downtown Raleigh Alliance, Raleigh Economic Development and Wake County Economic Development, North Carolina State University hosted the inaugural Raleigh Innovation Summit at the Raleigh Convention Center in January 2012. More than 175 people attended, representing government, area universities, nonprofits, venture capital firms, businesses and entrepreneurs.
- In February 2012 the Raleigh City Council unanimously adopted an Open Source Resolution. This is the first of many steps designed to make it easier to get information and interact with city government. Raleigh is committed to an open

source strategy that highlights transparency, collaboration, and improved access to local government information and data.

- The Open Raleigh initiative is an ongoing citizen partnership offering more resources and data over time. Raleigh is a partner in the open government community and strives to become a worldwide model for an open source city. Raleigh wants to develop opportunities for economic development, commerce, increased investment, and civic engagement. The City of Raleigh is taking a holistic approach to open government with open source, open data, and open access.

These are just a few examples of how all levels of the community are engaging in Raleigh's innovation and digital economic development.

In 2010, Raleigh was honored by Forbes magazine with the distinction of "America's Most Wired City." Raleigh is working to ensure it is the most wired in all communities. The City of Raleigh's Information Technology and Public Works departments are partnering to install approximately 125 miles of 24-strand dark fiber alongside the new fiber-optic traffic signal network. Approximately 90 percent of the fiber is aerial and the remaining 10 percent is underground. This fiber runs primarily along major thoroughfares and is being constructed to connect City buildings and area governmental and non-profit partners. Once completed, this fiber will cover approximately 142 square miles, providing high capacity infrastructure to many along its path. There are preliminary plans to install additional fiber and to develop a strategy for fiber infrastructure with other capital projects.

The City's fiber network will reach many areas within the Raleigh city limits, and in addition to City facilities will be in close proximity to a number of County, State, and other government and non-profit entities. The City anticipates this fiber can be used as a foundation to foster government and non-profit collaboration, public-private partnerships, economic development, and quality of life improvements for residents. In general, this fiber will serve to establish the City of Raleigh as a globally competitive community.

Realizing the potential of the fiber network, the City enlisted a consultant to conduct a fiber needs assessment and develop a business plan and best practice strategy for taking full advantage of the City's fiber network. The engagement provided the City of Raleigh with the following:

- Telecommunications Infrastructure Inventory Report and Maps - The inventory report and maps shows where broadband exists today and gives insight into areas that need additional infrastructure for the expansion of broadband services. The critical broadband access and telecommunications infrastructure information lays the foundation for broadband improvement plans and how it may integrate with the city's fiber network.

- Fiber Needs Assessment Report - The report identifies opportunities to create partnerships for the use, sharing and possible expansion of the fiber network.
- Business Plan - The business plan consists of organizational models that identify administrative, marketing and operational aspects for the citywide fiber network. The plan identifies the most effective processes to support the fiber network business strategy. The business plan places special focus on:
    - Promoting broadband access and usage to un-served and underserved areas of the city
    - Enhancing educational services by providing broadband access to libraries and City of Raleigh community centers
    - Integrating other City departments such as public safety and environmental services
    - Providing Wi-Fi spectrum for the new Dorothea Dix park
    - Supporting economic development initiatives as appropriate
    - Developing partnerships to sustain and expand the fiber network

Non-City Assets

The consultant, engaged by the City, performed an inventory and study that explored the available options and opportunities to help guide the City as it develops programs for the use and sustainability of the fiber network. The inventory identified and documented various telecommunications resources available in the City, including but not limited to fiber-optic infrastructure, broadband availability, wireless infrastructure, and incumbent and competitive providers and services. This is a preliminary overview of the inventory results.

The City of Raleigh lists non-City assets exclusively for informational purposes only and cannot make any representations or commitments to provide non-City assets for use in this project.

Infrastructure Owners

The inventory found considerable investment has been made in fiber infrastructure throughout the City by both private and public sectors. Eighteen individual owners of fiber infrastructure within the City were identified.

Broadband Availability

Nearly 100 percent of the City has access to land line broadband technologies. Locations that may not have access would be properties along inaccessible private drives or gated communities. Eleven facilities-based providers, not including cellular and localized wireless, offer residential and/or commercial services within the City of Raleigh.

Central Offices and Remote Terminals

A network of central offices was identified throughout the City, as were remote cabinets, which are used to extend advanced high capacity services closer to the users. Most, if not all, remote cabinets are connected with fiber, making them capable of providing high-speed broadband services.

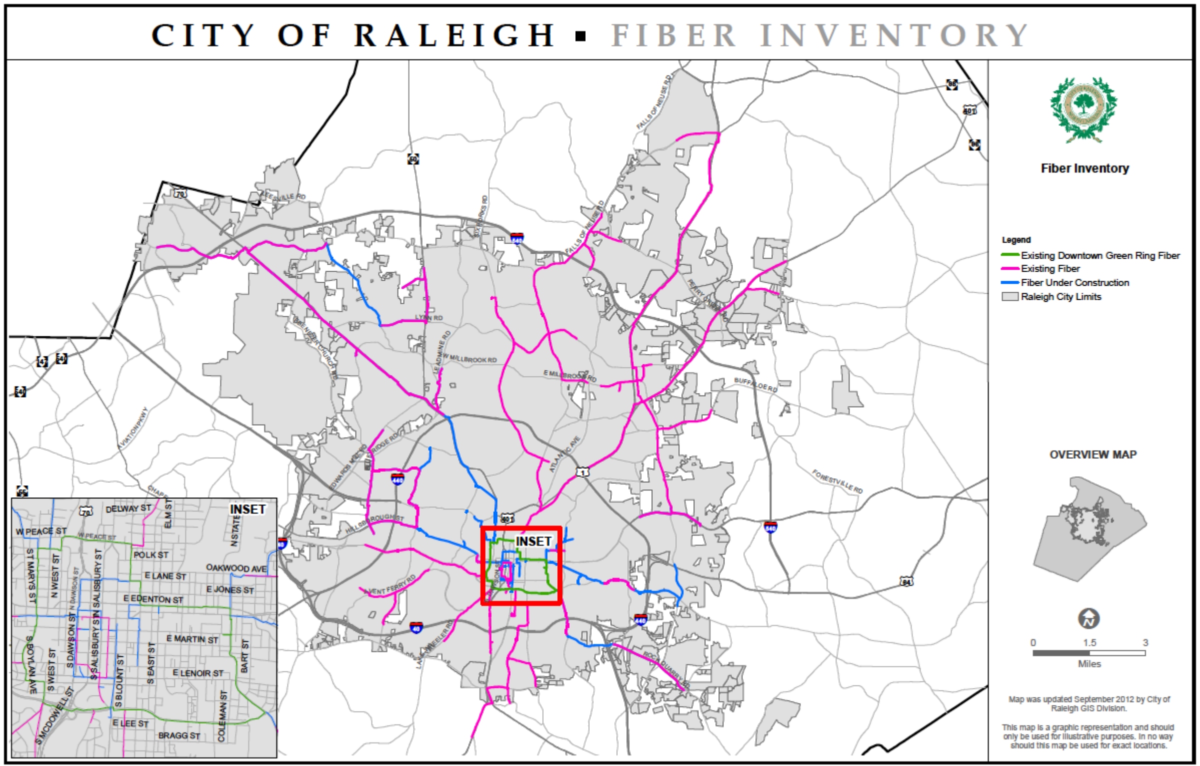
A total of nine central offices and many more collocation facilities were identified within the City. These facilities house the switches and electronics used by the telecommunications industry to provide services to the community. It is believed that all of these facilities are connected by fiber cabling, and many having desirable diverse fiber routes. A total of 23 providers, including incumbents, competitive local exchange carriers and others share these facilities and provide services within the City of Raleigh. The inventory found 332 points of presence (POPs).

Wireless Towers

Nearly 200 tower sites were identified, with as many as 300 more sites unconfirmed, including those used by private companies within the City. The towers were identified using various sources ranging from the FCC database and windshield studies to information provided by owners/users of the towers. Cellular spot checks performed during the inventory did not report any areas of zero coverage within the City limits.

Schedule 5.2

City of Raleigh Fiber Assets, Conduit, Additional Networks, Poles, and Facilities Available to the Vendor(s), including Fees and Mechanism for Availability



Map 1

This map shows the City of Raleigh fiber network within city limits. Existing fiber and dark fiber segments are denoted by different color lines. The enlarged inset is the downtown center city.

The City of Raleigh has defined fiber assets through an assessment. However, the City has not yet established a mechanism for availability or fee estimates.

The City of Raleigh seeks to make excess capacity available based on a business model that:

1. Provides fiber services to other City departments whereby eliminating the cost of leased services wherever possible. Portions of the cost savings will be used to support the operations and maintenance of the fiber network. In addition, these funds can also be used to support the expansion of the fiber to additional City facilities as needed.
2. Provides fiber services to not-for-profit and other government entities such as hospitals, schools, etc. on a leased basis. These entities will have the option of using the City fiber network to interconnect facilities and or collaborate to reduce

their operational costs and increase community opportunities.

3. Provides fiber services to economic development and community based initiatives and initiatives as defined. These will include but may not be limited to expansion of Broadband into targeted underserved and low-income areas. The creation of Public Private Partnerships (PPP) with carriers and private sector employers to foster the expansion and or retention of economic development opportunities within the City.

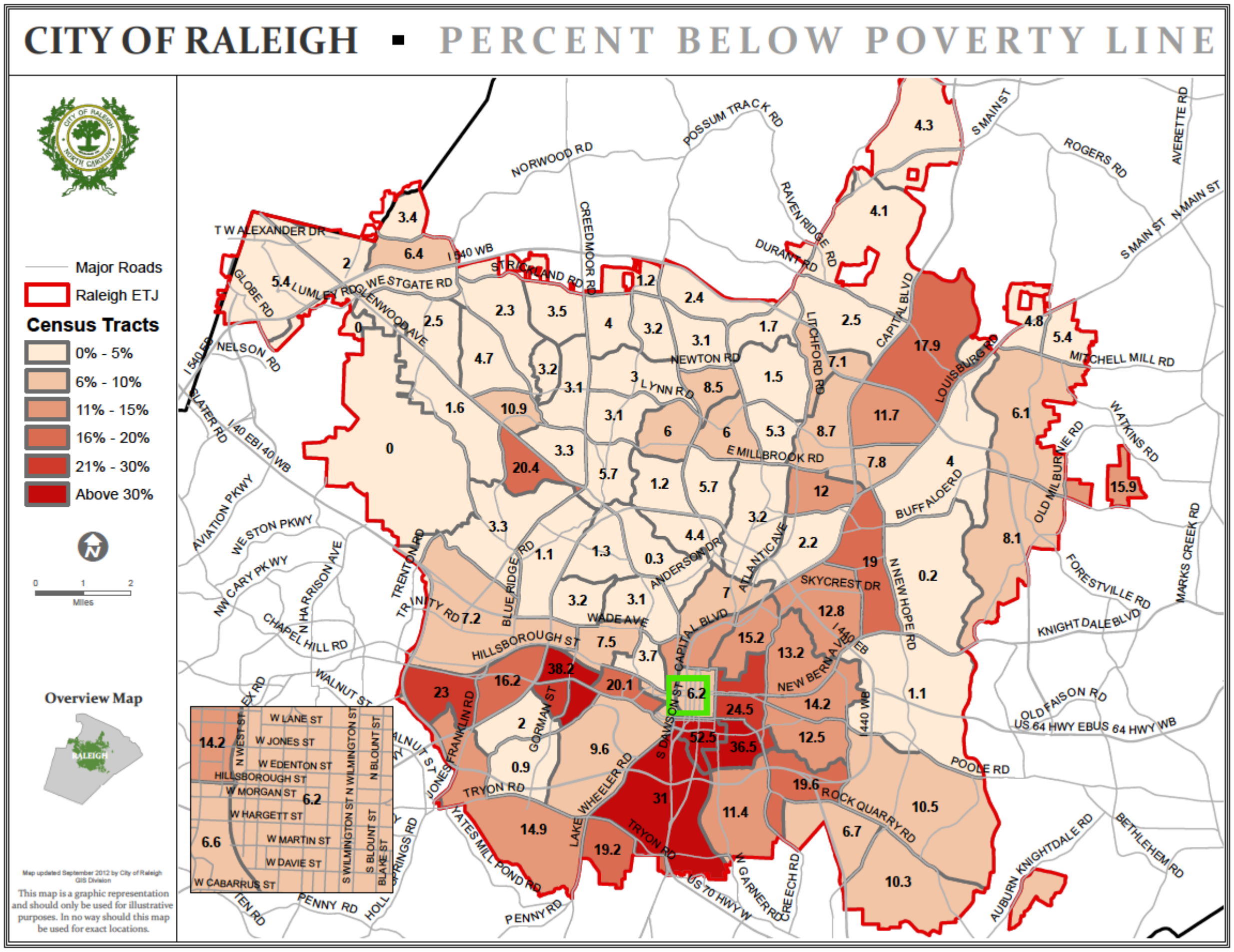
Schedule 5.3

City of Raleigh Fiber Master Permit for Right of Way Agreement, Encroachment Agreement or Franchise Agreement

To be negotiated with selected Vendor(s) at a later date.

Schedule 5.4

City of Raleigh Low-income Neighborhoods Map



The Percent Below Poverty Line map indicates the poverty levels within the city limits per U.S. Census tract based on the U.S. Census' American Communities Survey for 2010. The data does include students based on the following resident rules:

- College students living away from their parental home while attending college in the U.S. (living either on-campus or off-campus) - Counted at the on-campus or off-campus residence where they live and sleep most of the time.
- College students living away from their parental home while attending college in the U.S. (living either on-campus or off-campus) but staying at their parental home while on break or vacation - Counted at the on-campus or off-campus residence where they live and sleep most of the time.

- Foreign students living in the U.S. while attending college in the U.S. (living either on-campus or off-campus) - Counted at the on-campus or off-campus residence where they live and sleep most of the time.[1]

Poverty status is determined by comparing annual income to a set of dollar values called poverty thresholds that vary by family size, number of children, and the age of the householder. If a family's before-tax money income is less than the dollar value of their threshold, then that family and every individual in it are considered to be in poverty. For people not living in families, poverty status is determined by comparing the individual's income to his or her poverty threshold.

The poverty thresholds are updated annually to allow for changes in the cost of living using the Consumer Price Index (CPI-U). They do not vary geographically.

The ACS is a continuous survey and people respond throughout the year. Since income is reported for the previous 12 months, the appropriate poverty threshold for each family is determined by multiplying the base-year poverty threshold (1982) by the average of monthly CPI values for the 12 months preceding the survey month.[2]

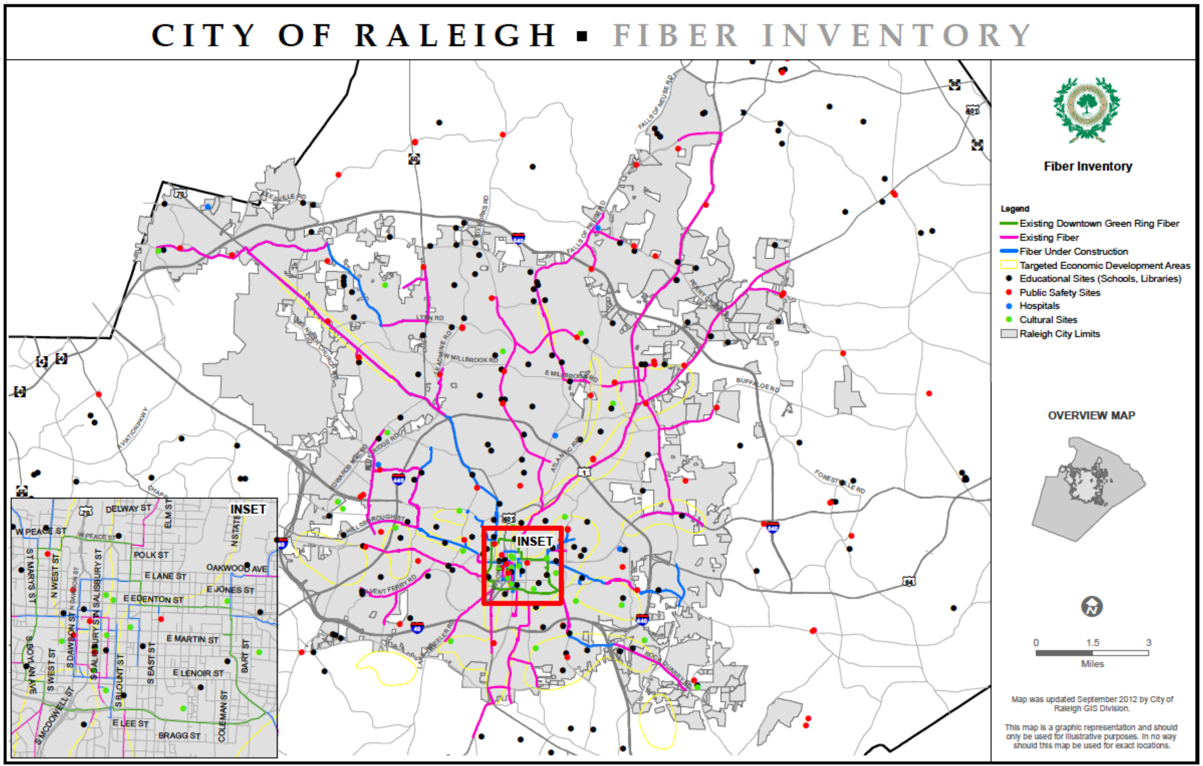
For additional information see How Poverty is Calculated in the American Communities Survey: www.census.gov/hhes/www/poverty/methods/definitions.html

[1] United States Census 2010, *Resident Rule and Resident Situations for the 2010 Census*. Retrieved from http://www.census.gov/population/www/cen2010/resid_rules/resid_rules.html

[2] Bishaw, Alemayehu. *Poverty: 2010 and 2011 American Community Survey Briefs*. United States Census Bureau. http://www.census.gov/prod/2012pubs/acsbr11-01.pdf

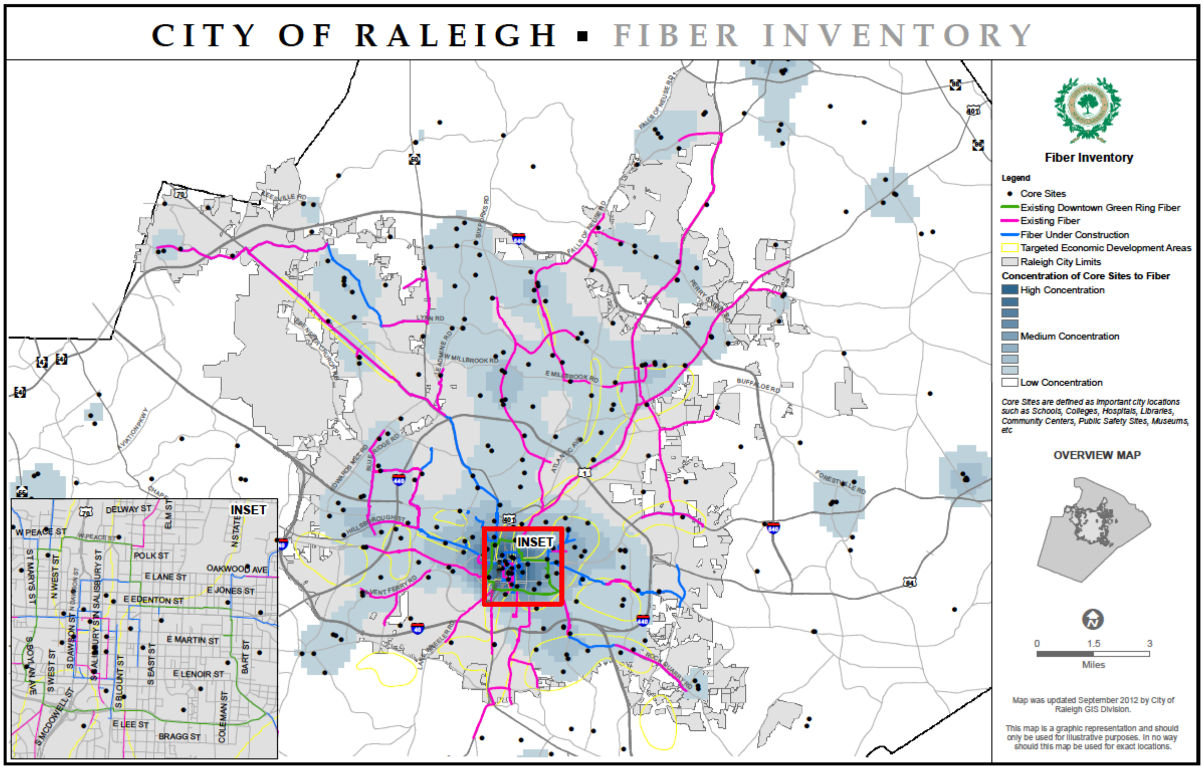
Schedule 5.5

City of Raleigh Demand Maps



Map 3

This map shows important locations within the city denoted in different colors by type. The yellow lines indicate the targeted economic development areas identified in the City of Raleigh Comprehensive plan. Different colored dots indicate the location of important core facilities such as schools, colleges, universities, hospitals, libraries, community centers, public safety sites and museums. The enlarged inset is the downtown center city.



CITY OF RALEIGH ▪ FIBER INVENTORY
Fiber Inventory
Legend
● Core Sites
Existing Downtown Green Ring Fiber
Existing Fiber
Fiber Under Construction
Targeted Economic Development Areas
Raleigh City Limits
Concentration of Core Sites to Fiber
High Concentration
Medium Concentration
Low Concentration
Core Sites are defined as important city locations such as Schools, Colleges, Hospitals, Libraries, Community Centers, Public Safety Sites, Museums, etc
OVERVIEW MAP
0
1.5
3
Miles
Map was updated September 2012 by City of Raleigh GIS Division.
This map is a graphic representation and should only be used for illustrative purposes. In no way should this map be used for exact locations.
INSET
DELWAY ST
ELM ST
W PEACE ST
N STATE ST
POLK ST
ST MARYS ST
N WEST ST
N SALISBURY ST
OAKWOOD AVE
E LANE ST
E JONES ST
E EDENTON ST
E MARTIN ST
S BOYLAN AVE
S WEST ST
S DAWSON ST
S SALISBURY ST
S BLOUNT ST
S EAST ST
E LENOIR ST
BART ST
S MCDOWELL ST
E LEE ST
BRAGG ST
COLEMAN ST
LYNN RD
W MILLBROOK RD
E MILLBROOK RD
BUFFALOE RD
AVIATION PKWY

Map 4

The heat map indicates the density of important sites relative to the City of Raleigh fiber network. Yellow lines indicate the targeted economic development areas identified in the City of Raleigh Comprehensive plan. Black dots indicate the location of important core facilities such as schools, colleges, universities, hospitals, libraries, community centers, public safety sites and museums. The enlarged inset is the downtown center city.

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Schedule 5.6

Additional Assets To Be Provided To Vendor

The City of Raleigh can provide the following fiber-related GIS shape files:

Name	Comment
City of Raleigh Connection Sites and Facilities	This is a layer that shows City facilities of many different City departments that are (or will potentially be) connected to the City Fiber Network.
Completed IT Fiber	This layer shows all the IT fiber that has been installed. There are two other distinct layers I have grouped into this but that should be considered part of the “completed” fiber: the "Green Ring" (a loop around the downtown Central Business District area) and the "Downtown Fiber Ring" (a small loop in the downtown area that connects such facilities as the RMB, Dillon Building, RPD facility, Raleigh Convention Center, and One Exchange Plaza).
Core Sites	This layer shows the locations of the Chavis, Tarrboro, PAC core sites. A core site is a part of the Fiber Optic Network design; the core connects to hubs, and the hubs connect to specific locations.
Hub Sites	This layer shows the locations of hub sites. Hub sites are positioned along the fiber routes and are connected to the core locations. Links to the remote sites are created from the hub locations using local fiber rings.
IT Fiber Under Construction	A layer that shows the planned fiber that has not yet been installed.
Target Areas for Economic Development	These are areas that have been identified as areas that are targeted for economic development efforts.

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Schedule 6.1

City of Winston-Salem Introduction

As an anchor for Northwest North Carolina, Winston-Salem is a magnet for thousands of people who commute from surrounding counties to work, shop, and seek services every day. We have developed a knowledge-based economy with strengths in biomedicine, life sciences, financial and legal services, nanotechnology, design, and advanced manufacturing.

Winston-Salem is a place where businesses of all sizes thrive. Several Fortune 500 companies are headquartered or have major operations here. And the new, innovative companies forming throughout Winston-Salem and in the Piedmont Triad Research Park under the direction of Wake Forest Baptist Medical Center are producing revolutionary discoveries that promise to transform our lives. These companies are driven by exceptional people who are creating remarkable technologies. It is not an exaggeration to say that some of the most talented scientists, researchers, analysts, and scholars in the world now call Winston-Salem home because of the opportunities available here.

Outside of work, Winston-Salem offers a high quality of life with distinctive social, cultural, and recreational opportunities wrapped in a unique history that influences how we live now and how we plan for our future. Winston-Salem remains focused on keeping our identity authentic while making sure we are ready to compete in an increasingly competitive global marketplace.

Demographics

Population

In 2010, 229,617 people lived in Winston-Salem. Growth since 2000 has been steady, with the population increasing by 23.6%. Population is projected to grow beyond 265,000 by 2020.

The core of Downtown Winston-Salem has also seen some dramatic growth in the last decade. More than 2,000 people now live in the very core of Downtown – a 36.9% increase in the last ten years. Plus, more than 600 new housing units have been added to this area over that same period – a 111.8% increase!

Downtown Winston-Salem remains the employment hub for our community. Over 25,000 employees work within a mile of downtown’s center and companies are increasingly attracted to the amenities downtown offers their employees. For example, just recently Inmar announced that they will move from the suburbs to downtown Winston-Salem, bringing over 1,000 new employees to the center city.

Future Growth

Scheduled investments in our schools, colleges, and public libraries will enhance our educational assets. The continued expansion of the Piedmont Triad Research Park will provide a place where knowledge-based companies can locate and create jobs. And, improvements to our transportation system, such as Business 40's redesign, construction of I-74/Northern Beltway, new bike lanes and greenways, and potentially a new streetcar system will provide these new residents with choices of how to move around our community.

A Diversifying Community

Winston-Salem is becoming more racially and ethnically diverse. In 2010, according to the U.S. Census Bureau, 14.7% of Winston-Salem's population was Hispanic, up from just 8.6% in 2000. Our African-American and Asian populations are also growing at rates well above average.

Employment

Winston-Salem's most recent unemployment rate has been reported at 9.2%. The Winston-Salem Metro area added the second most jobs of any metro in North Carolina over the previous year from September 2011. Industries that have shown employment increases over that same period include: education, health care, trade, and even the construction and manufacturing industries, which have been particularly hard hit in recent years.

Almost 45,000 people work at Forsyth County's ten largest employers: Wake Forest Baptist Medical Center, Novant Health, Winston Salem/Forsyth County Schools, Reynolds American, Hanesbrands, Inc., Wells Fargo, City of Winston Salem, Forsyth County, BB&T, and Wake Forest University.

Education and Workforce

A skilled and talented workforce is fundamental to the continued transformation of Winston-Salem's economy in this increasingly competitive, global, and mobile economy. Developing this type of a workforce will distinguish us from other communities and identify us as a place prepared to thrive in today's technology and information economy.

Fortunately, that future workforce is coming from a set of schools, colleges, and universities that combine to provide valuable opportunities for people to improve their skills and experiences.

The Winston-Salem/Forsyth County School System and some of the best private and parochial schools in North Carolina offer exceptional educational opportunities for our residents and their children.

There are nearly 60,000 college students and an additional 44,000 community college curriculum students in the Piedmont Triad. Just in Winston-Salem, with Forsyth Technical Community College, Salem College, UNC School of the Arts, Wake Forest University, and Winston-Salem State University, we are exceptionally fortunate to have five of the finest higher educational institutions in the United States that attract top students and faculty from all over the world.

Quality of Life and Economic Development

Increasingly, a community's quality of life is a major factor for companies and entrepreneurs in determining where they locate, expand, or start a business. Companies and their employees are looking for places that can offer a unique experience while also allowing their business and careers to prosper. Winston-Salem's quality of life is an asset that is crucial to our community's overall economic development goals.

Winston-Salem's historic neighborhoods, its arts and cultural opportunities, its location near the Blue Ridge Mountains, its countless recreational offerings, its social outlets, and its affordable cost of living all combine to make our community increasingly attractive to new businesses and residents.

Looking Ahead

Today, our steady population growth, an economy strong in health care and professional services, an esteemed educational system, an affordable housing market, a low cost of living, a revitalized downtown, many nearby outdoor recreational opportunities, and a high quality of life all provide Winston-Salem with a formidable foundation for growth in the 21st century.

However, we still have a lot of work to do to get where we want to be. Just in the next few years, our community will see a number of new investments that have the potential to help redefine our community for decades. Construction in the Piedmont Triad Research Park will continue and its expansion will eventually cover 250 acres linking with the westward expansion of Winston-Salem State University and helping to connect a lower-income community to the rest of downtown. The expanded research park has the potential to become the largest urban research park in North America.

Additionally, a new central library will be planned and built. US 52 and Business 40 will change dramatically and I-74/Northern Beltway construction finally will begin. Plans for new streetcar lines in Winston-Salem's center city will gain traction. And more people will live in our downtown area as they seek out a vibrant urban lifestyle.

At a broader level, educational attainment will continue to be a key factor in determining our prosperity. We also must be prepared to engage and welcome the new residents who will move here. We must seek out ways to integrate our community into the larger global economic trends shaping North Carolina. But we also should look towards the broader

Piedmont region, extending from Raleigh to Atlanta, and find opportunities to actively participate in one of the fastest growing “megaregions” in the country.

Making available affordable high-speed broadband at gigabit speeds provides an opportunity to do just that. A community with ultra-high speed broadband access will be able to distinguish itself from others while providing its businesses and citizens with the fundamental tools now needed to thrive in a global economy that is increasingly competitive and connected.

Community Goals for the Network

Tele-Medicine

There are a significant number of Physicians practices throughout Forsyth County. Practices are rapidly moving to electronic Medical Records that include large data sets associated with images generated by Radiology equipment (Ultrasound, MRI and CAT), Pathology, and Dermatology. High speed networks will be required to transport these large files throughout the region to support increased patient management.

Equity/Access/Digital Divide

There remains an unaddressed component of the community that has no access to the Internet primarily due to cost barriers. Several programs are in place to provide public access Internet facilities, but the most effective solution is to have access from the home.

A Service Provider will be asked to provide a low-cost and minimum bandwidth option to residents in the same areas in which the very high bandwidth services are offered. The option would complement other community initiatives that include computer literacy training, K-12 programs, and availability of low-cost refurbished computer equipment.

Economic Development

For over 20 years, the Winston-Salem Chamber’s Tech Council has been creating and implementing strategies to encourage the growth of these knowledge-based industries and to ensure our community has the foundation needed for these businesses to thrive. While we have had a number of successes, we know that Winston-Salem must continue to be at the forefront of implementing innovative economic development strategies to remain competitive. Introducing ultra-high speed broadband into our community will be a major component of these broad overall efforts.

Having ultra-high speed broadband in our community will greatly enhance our more targeted economic development strategies. For example, over the last decade the revitalization of Downtown Winston-Salem has made tremendous gains. New residences, restaurants, bars, entertainment venues, offices, and other public and private investments have generated an enthusiasm and excitement and are helping to transform our center city. Plus, over $285 million in new public and private investments have already been announced for the next few years in the downtown area. And that figure does not include the plans for a new streetcar that will increase mobility and access within the downtown core.

It will be especially beneficial to high-tech companies and researchers located, and looking to locate, within the Piedmont Triad Research Park – a nearly 250-acre urban campus currently under development that is expected to employ more than 20,000 workers when built out.

Ultra-high speed broadband will also complement our efforts to attract, expand and retain businesses and to foster entrepreneurship in Winston-Salem. Communities across the country and the world are desperate to bring in and keep the types of companies and entrepreneurs who would benefit from an infrastructure differentiator like this. These are the companies and individuals that are creating high-paying jobs that can and do provide Winston-Salem with the economic base for long-term future growth. Ultra-high speed broadband access is fundamental to their productive operations and we need to provide them with this tool that is now vital for their success.

Faculty Staff, and Students – Educational Institutions

The City of Winston Salem and Forsyth County have five upper level educational institutions whose workforce is positioned for growth in innovative research. Over 1,500 faculties are associated with Wake Forest Baptist Medical Center, Wake Forest University, Winston Salem State University, Salem College, UNC School of the Arts, and Forsyth Technical Community College. Combined, these institutions have over 26,000 students.

Schedule 6.2

City of Winston-Salem Fiber Assets, Conduit, Additional Networks, Poles, and Facilities Available to the Vendor(s), including Fees and Mechanisms for Availability

There are a wide range of assets that Winston-Salem could make available to the selected vendor(s) as described below. Charges for use would be below market rates, with further consideration depending on the extent that services are provided for the 'public good'. This would include addressing the needs of the digitally disadvantaged, broadband speeds, commercial and residential rates, and amount of coverage.

Existing Fiber

The City of Winston-Salem currently owns approximately six miles of 24-strand fiber cabling serving two campus locations and three additional City facilities.

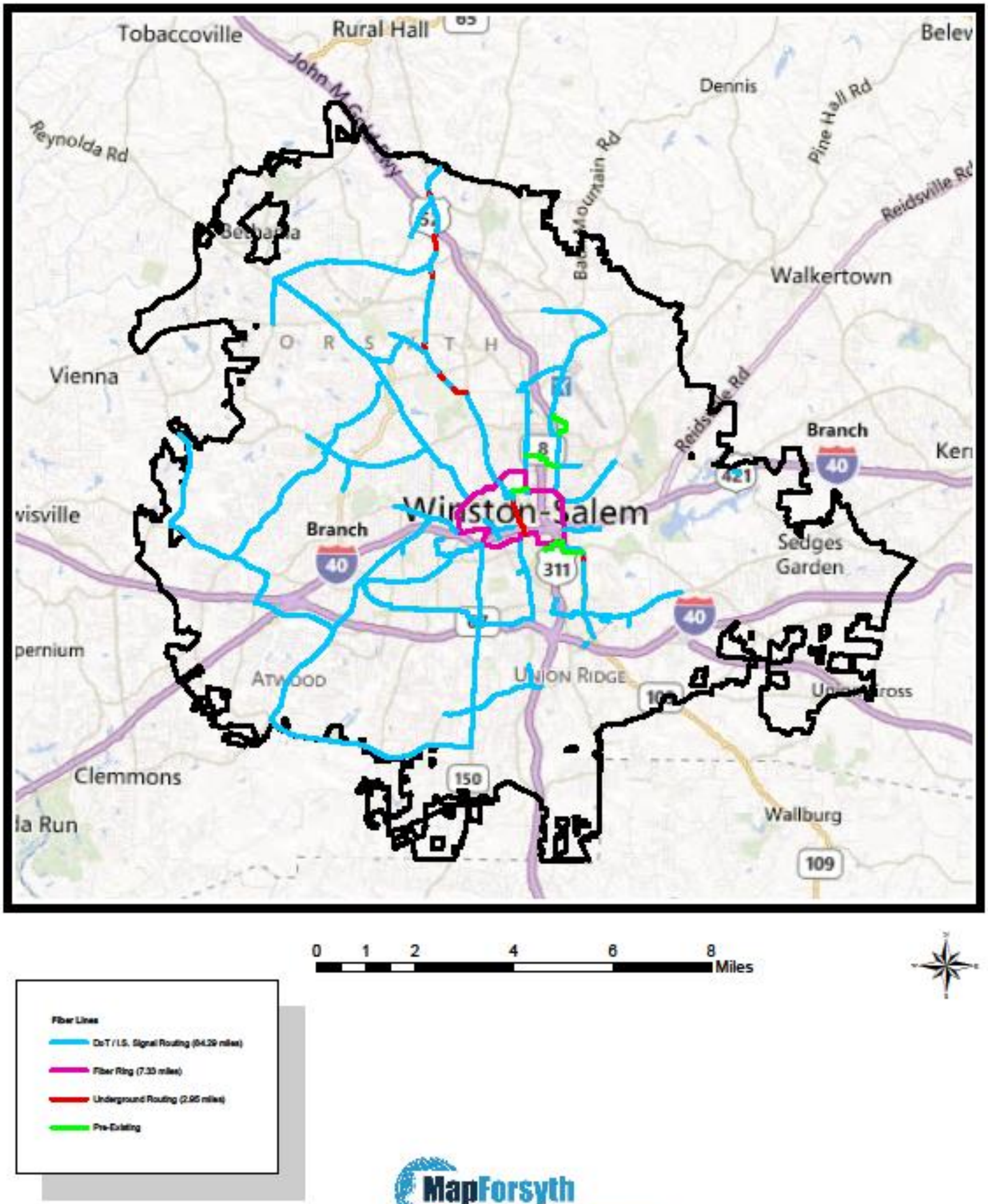
Active Deployment of New Fiber

The City of Winston-Salem's Information Technology department is actively working to install nearly 90 miles of dark fiber in conjunction with the City's new fiber-optic traffic signal network. This new IT fiber network includes 144 strands of fiber in a ring encircling the metropolitan downtown area and a minimum of 24 strands per 'spoke' emanating from the ring along major thoroughfares into areas surrounding the City. When completed in late 2014, the infrastructure network will allow for high speed fiber connectivity to almost 100 City, County, and School System facilities. Approximately 85 percent of the fiber is aerial and the remaining 15 percent underground.

Also, the City's fiber network will be in close proximity to a number of additional governmental, non-profit, and business entities, paving the way for this fiber to be used as a backbone to foster future government and non-profit collaboration, public-private partnerships, economic development, and quality of life improvements for residents. This fiber will serve to solidify the City of Winston Salem's reputation as an established national and global leader in the deployment and use of technology.

Signal Communication Fiber Lines - Existing and Proposed

City of Winston-Salem

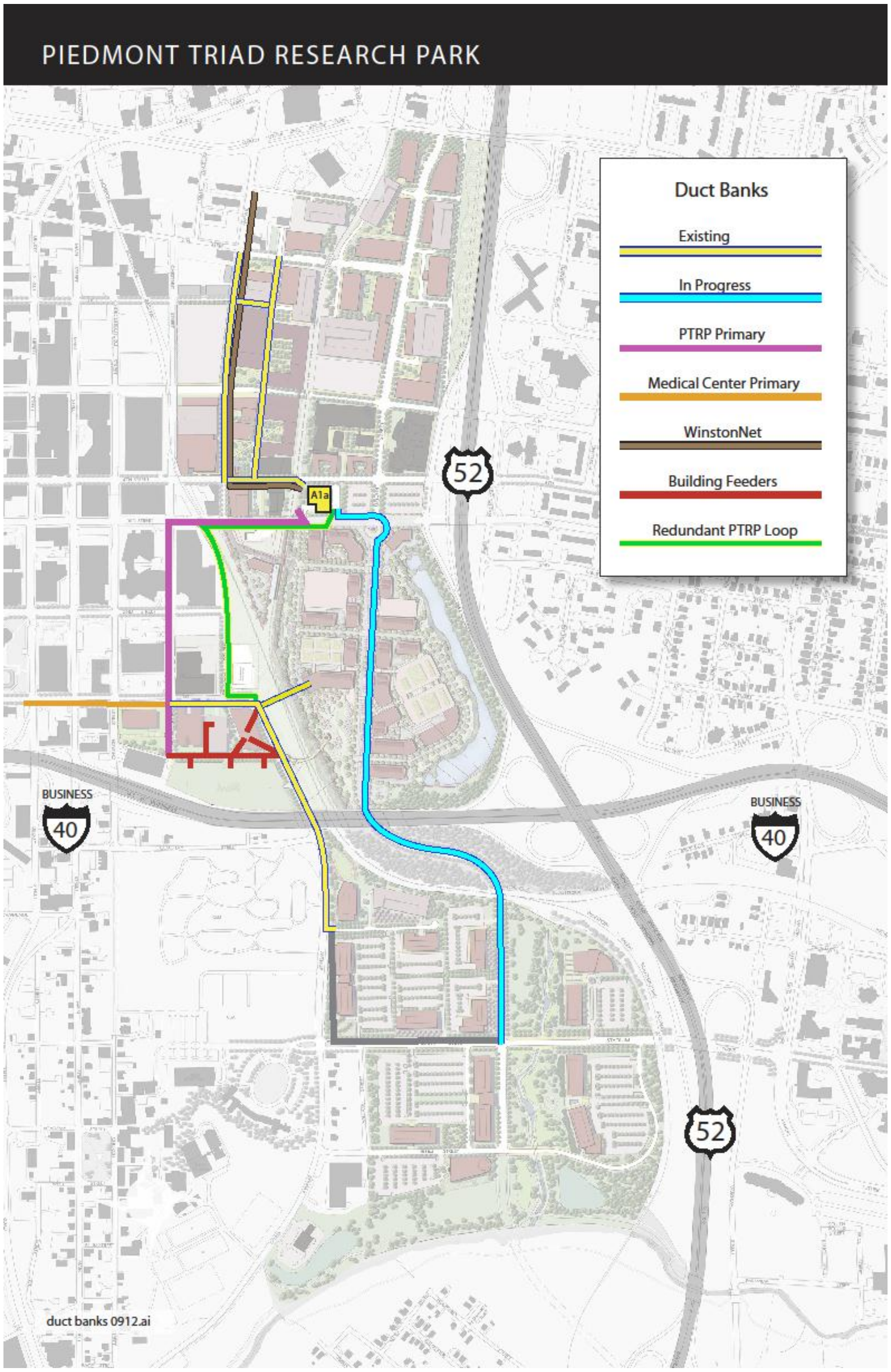


MapForsyth

City-County Geographic Information Office

Conduit

The Piedmont Triad Research Park is surrounded by a Telecom Duct Bank consisting of concrete enclosed 12-4” ducts with well positioned manholes for easy access to building locations. This duct bank, which traverses throughout the 250 acre Park, provides enhanced security of data transmission cabling.

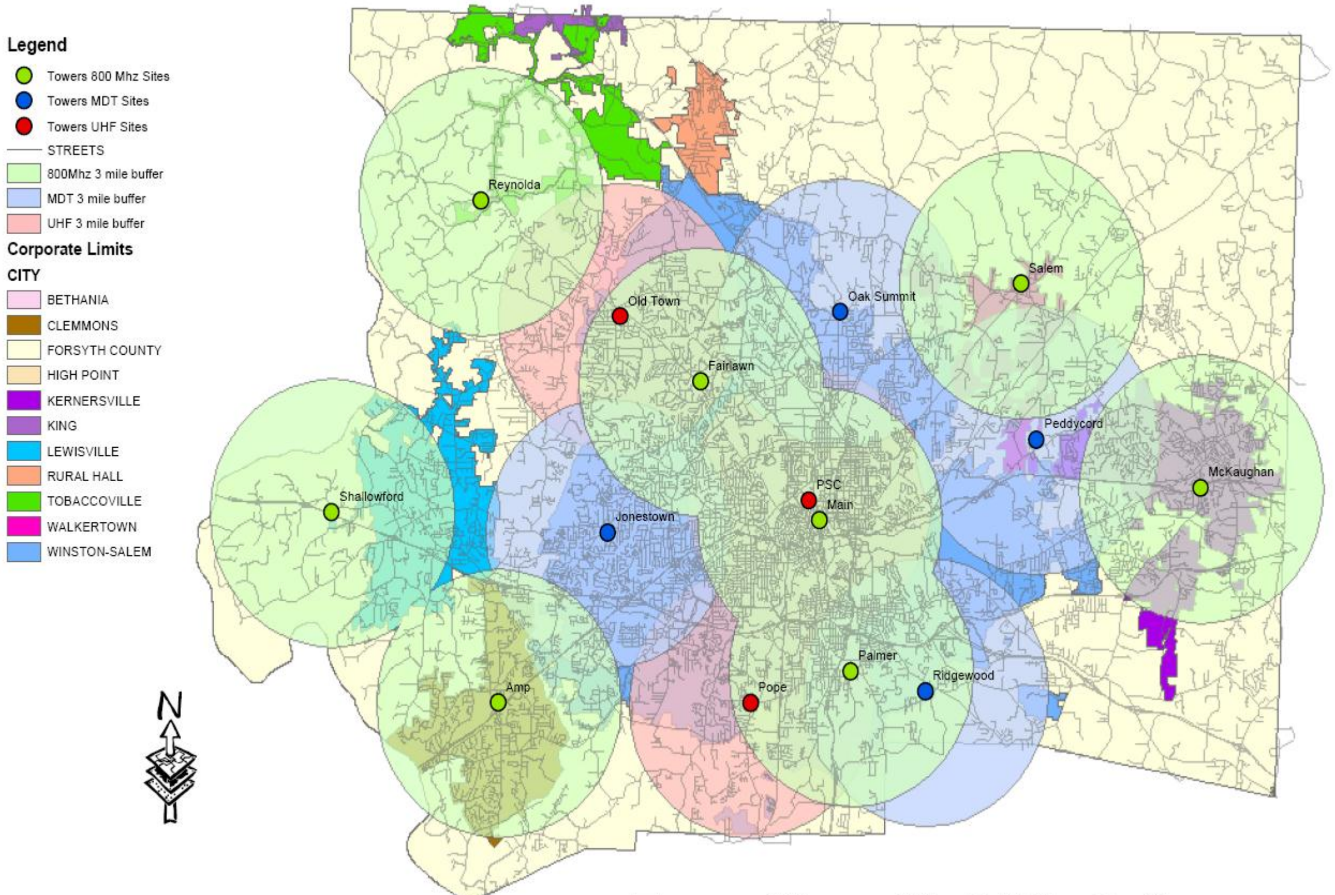


Carrier Hotel

The Data Center for the Piedmont Triad Research Park has a Carrier Hotel to support telecommunication carrier's distribution equipment. A number of carriers already utilize the hotel for their equipment. All telecommunication fiber optics from all the buildings in the Park, along with the fiber from other Wake Forest Baptist Medical Center locations, Wake Forest University's Reynolda campus, local governments, and all the connections from telecommunications vendors that give access to the outside world from the Park begin and end here. The Data Center has access to four large vaults located at the building corners that are connected to the Park's telecom duct bank.

Towers

A variety of towers owned by local governments are located within Winston-Salem and Forsyth County with available space. Towers identified in the following map range from smaller towers at approximately 125 to 150 feet that were previously used for UHF and mobile data terminals to towers supporting the public safety radio system with heights between 350 and 450 feet (800 MHZ).



Tower Sites with 3 Mile Buffers

Pole Attachments

Most poles are owned and managed by Duke Energy and are subject to the authority of the North Carolina Utilities Commission. The City of Winston-Salem will assist a service provider with coordinating access to these poles.

The City of Winston-Salem owns poles in the downtown area at the major intersections. These poles are used primarily for traffic signals.

Schedule 6.3

City of Winston-Salem Fiber Master Permit for Right of Way Agreement, Encroachment Agreement or Franchise Agreement

Internet services do not require local City franchise agreements. Depending on the services to be offered by the respondent, a state franchise through the Secretary of State's office may be required.

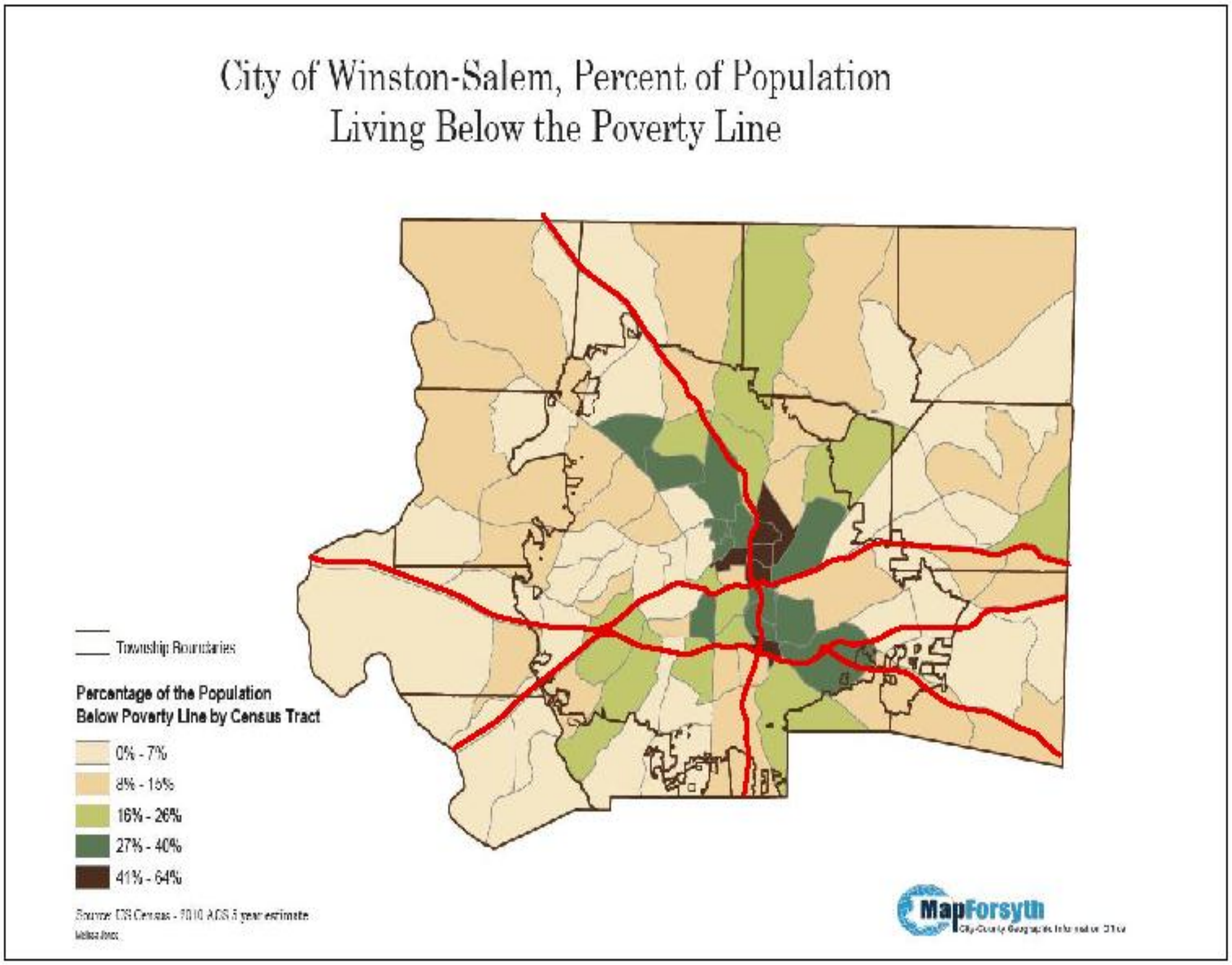
The City of Winston-Salem will strive to minimize the cost and administrative overhead associated with the permitting process. The standard practice is to require a permit and a set fee for cutting a street, sidewalk or gutter to cover the repair costs to the City. In place of individual permits, the City will establish a Master Encroachment Agreement for a one-time fee of approximately $400. The Agreement will cover all construction in the City's rights-of-ways with a fee of $7 per square foot for all repairs exceeding 25 square feet. The Service Provider would be expected to include drawings showing all the locations where construction will occur and to coordinate with the City's Department of Transportation wherever there may be impact to traffic. Depending upon the size of the final implementation and potential community benefit, the Service Provider could submit a request to City Council to waive all fees.

A single point of contact will be assigned to the Service Provider to assist with completion of the Master Encroachment Agreement, to ensure a reasonable response to all issues related to right-of-way management, and to provide general guidance. There will be no charge for this person's time. No extra charges are anticipated for responding to emergencies or unexpected events.

Schedule 6.4

City of Winston-Salem Low-income Neighborhoods Map

A priority of the City is to ensure that an initial build-out phase serves low-income neighborhoods as well as those in higher income areas. The following map shows income distribution below the poverty line by neighborhood.



City of Winston-Salem, Percent of Population Living Below the Poverty Line

Township Boundaries
Percentage of the Population Below Poverty Line by Census Tract
0% - 7%
8% - 15%
16% - 26%
27% - 40%
41% - 64%
MapForsyth
City-County Geographic Information Office

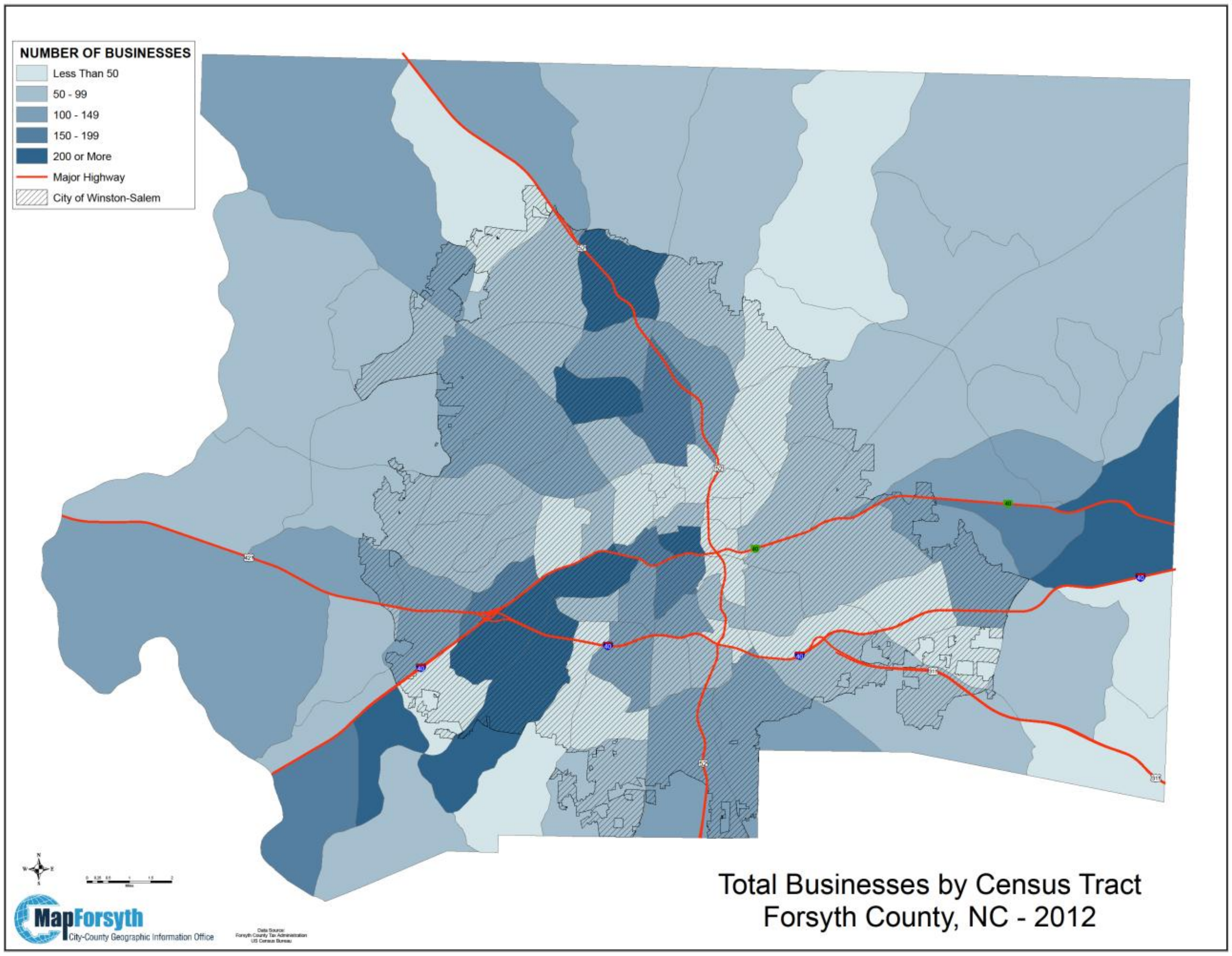
Source: US Census - 2010 ACS 5 year estimate

Schedule 6.5

City of Winston-Salem Demand and Maps

A recently updated Legacy Planning Guide for the City of Winston-Salem was adopted by City Council (www.legacy2030.com). The Plan documents existing and proposed land use and population distributions. It is a policy document that guides planning initiatives, and can be used in deciding priority areas for the initial network implementation.

The first phase of the network construction could proceed along the business corridors as identified in this Land Use map, and could include commercial and residential services to the surrounding areas.



Total Businesses by Census Tract
Forsyth County, NC - 2012

Known high priority business areas include:

- Wake Forest University, Winston-Salem State University, University of North Carolina School of the Arts, and Salem College
- Wake Forest Baptist Medical Center, Forsyth Medical Center, and Forsyth Technical Community College Main Campus to the west
- Downtown and Center City
- Piedmont Triad Research Park

Schedule 6.6

Additional Assets To Be Provided To Vendor

There are many facilities throughout the City of Winston-Salem that could be used for locating equipment. Locations and maps are available upon request.

Facility	**Number of Locations**
Fire stations	18
Parking garages	7
City Hall	2
Water towers	14
Recreation centers	19
City parks	75

Schedule 7.1

Letters of Support

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

November 21, 2012

Marc Hoit, Ph.D.
Vice Chancellor for Information Technology & CIO
Professor of Civil, Construction & Environmental Engineering
North Carolina State University
Room 1A Holladay Hall, PO Box 7015
Raleigh, North Carolina 27695

Subject: The University Community Next Generation Innovation Project (Gig.U)

Dear Dr. Hoit:

This is in further reference to previous conversations regarding the more global Gig.U effort, as well as localized requests for the joint use of the North Carolina Department of Transportation's (NCDOT) existing fiber system for public broadband purposes.

As you are aware, Gig.U seeks to accelerate the deployment of ultra-high-speed networks to leading United States universities and their surrounding communities to drive economic growth and stimulate innovations addressing critical needs, such as health care and education. Additionally, several local governments such as the City of Durham, County of Durham and the City of Raleigh have expressed interest in the joint use of fiber networks for facilities, public schools and police substations.

Our mission of connecting people and places in North Carolina is compatible with the principle goals of Gig.U's desire to connect centers of learning and knowledge by the use of fiber optic cable. NCDOT has been a partner in the process of providing broadband technologies to all parts of the state through recent projects by MCNC, and we are committed to partner with Gig.U and local governments on their initiatives as well.

The joint use of existing and future fiber for public broadband purposes may provide some opportunity for the goal of the project; however, there will be some legislative, fiscal, and fiber capacity hurdles that need to be addressed. It is my opinion that public-private partnership arrangements will be an intricate part of these efforts due to the high interest from private communication companies and suppliers.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
CHIEF ENGINEER'S OFFICE
1536 MAIL SERVICE CENTER
RALEIGH NC 27699-1536

TELEPHONE: 919-707-2500
FAX: 919-733-9428

WEBSITE: WWW.NCDOT.GOV

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

Please consider this as a letter of commitment for NCDOT to continue to partner with these efforts to enhance communication and economic development in North Carolina. I have attached maps detailing the Department's fiber networks and some details regarding fiber capacities for your information. When considering the proportion of the project, it is imperative that contingencies and capacities are reviewed thoroughly and accurately during the planning phase to ensure that NCDOT can be a beneficial partner in the program.

Our Attorney General's staff will be reviewing existing statutes and working with our local Federal Highway Administration and local government representatives to identify focus areas. NCDOT has played a major role in fostering an environment for future technology and entrepreneurial growth in North Carolina, and is dedicated to continue to make our transportation network safer and move people and goods more efficiently.

If I may provide additional information regarding the matter, please let me know.

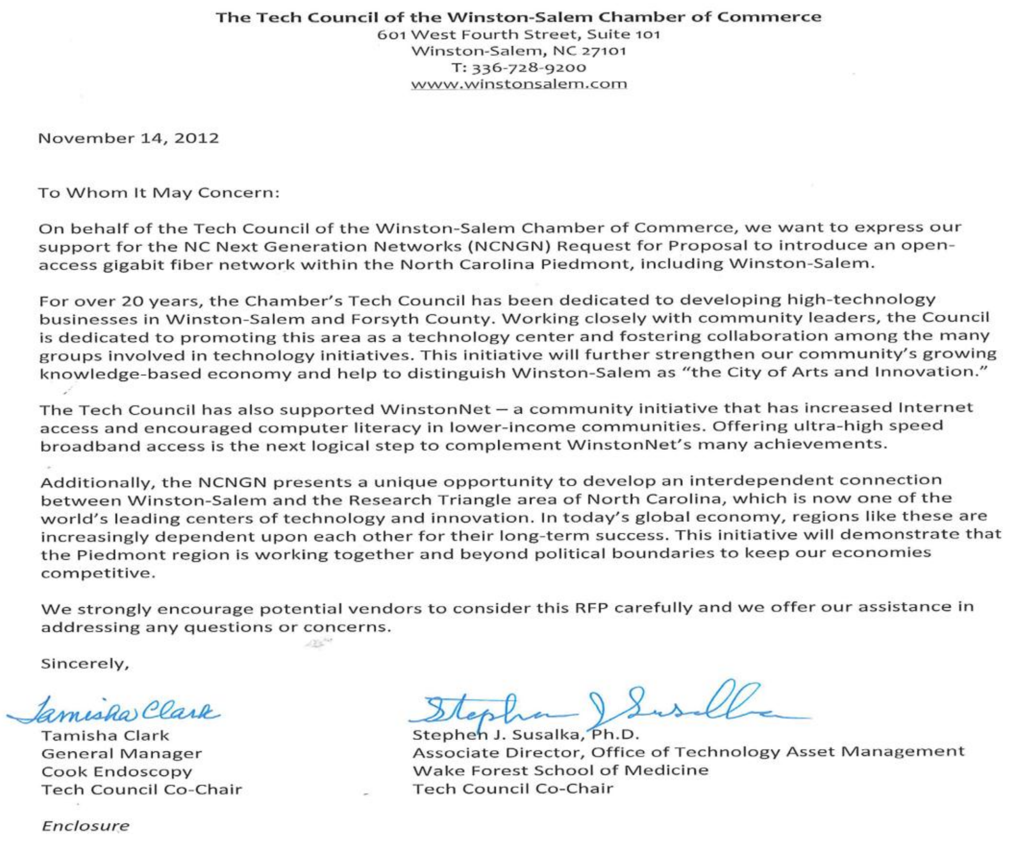
Sincerely,

J. G. Nance, PE
Deputy Chief Engineer

JGN:sh

Attachments

cc: Eugene A. Conti, Jr., Secretary of Transportation
T. R. Gibson, PE, Chief Engineer
Elizabeth McKay, Special Deputy Attorney General



The Tech Council of the Winston-Salem Chamber of Commerce
601 West Fourth Street, Suite 101
Winston-Salem, NC 27101
T: 336-728-9200
www.winstonsalem.com

November 14, 2012

To Whom It May Concern:

On behalf of the Tech Council of the Winston-Salem Chamber of Commerce, we want to express our support for the NC Next Generation Networks (NCNGN) Request for Proposal to introduce an open-access gigabit fiber network within the North Carolina Piedmont, including Winston-Salem.

For over 20 years, the Chamber's Tech Council has been dedicated to developing high-technology businesses in Winston-Salem and Forsyth County. Working closely with community leaders, the Council is dedicated to promoting this area as a technology center and fostering collaboration among the many groups involved in technology initiatives. This initiative will further strengthen our community's growing knowledge-based economy and help to distinguish Winston-Salem as "the City of Arts and Innovation."

The Tech Council has also supported WinstonNet – a community initiative that has increased Internet access and encouraged computer literacy in lower-income communities. Offering ultra-high speed broadband access is the next logical step to complement WinstonNet's many achievements.

Additionally, the NCNGN presents a unique opportunity to develop an interdependent connection between Winston-Salem and the Research Triangle area of North Carolina, which is now one of the world's leading centers of technology and innovation. In today's global economy, regions like these are increasingly dependent upon each other for their long-term success. This initiative will demonstrate that the Piedmont region is working together and beyond political boundaries to keep our economies competitive.

We strongly encourage potential vendors to consider this RFP carefully and we offer our assistance in addressing any questions or concerns.

Sincerely,

Tamisha Clark	Stephen J Susalka
Tamisha Clark General Manager Cook Endoscopy Tech Council Co-Chair	Stephen J. Susalka, Ph.D. Associate Director, Office of Technology Asset Management Wake Forest School of Medicine Tech Council Co-Chair

Enclosure

January 23, 2013

To Whom It May Concern:

On behalf of Forsyth County, I would like to express support for the **North Carolina Next Generation Networks** (NCNGN) Request for Proposal to introduce an open-access gigabit fiber network in Winston-Salem and North Carolina.

Forsyth County has an interest in seeing that our citizens can enjoy the best possible access to information technology including broadband as an outreach to our Libraries, School System and Forsyth Technical Community College. The super high-speed bandwidth access would certainly enrich the educational experience within our community.

Accelerating the offering of ultra-high-speed network services to our community through the **North Carolina Next Generation Networks** will drive economic growth, improve competitiveness and stimulate innovation. Our organization and our society are increasingly dependent on high-speed broadband networks to compete and remain viable in this global economy.

On behalf of Forsyth County, we strongly encourage potential vendors to consider this RFP. We support the initiative and will gladly offer any assistance we can provide.

Sincerely,

Robert Robinson – CIO Forsyth County

INVESTORS MANAGEMENT CORPORATION

January 25, 2013

Marc Hoit, Ph.D.
Vice Chancellor for Information Technology & CIO
Professor of Civil, Construction & Environmental Engineering
North Carolina State University
Room 1A Holladay Hall, PO Box 7015
Raleigh, NC 27695

Subject: North Carolina Next Generation Network (NCNGN) Project

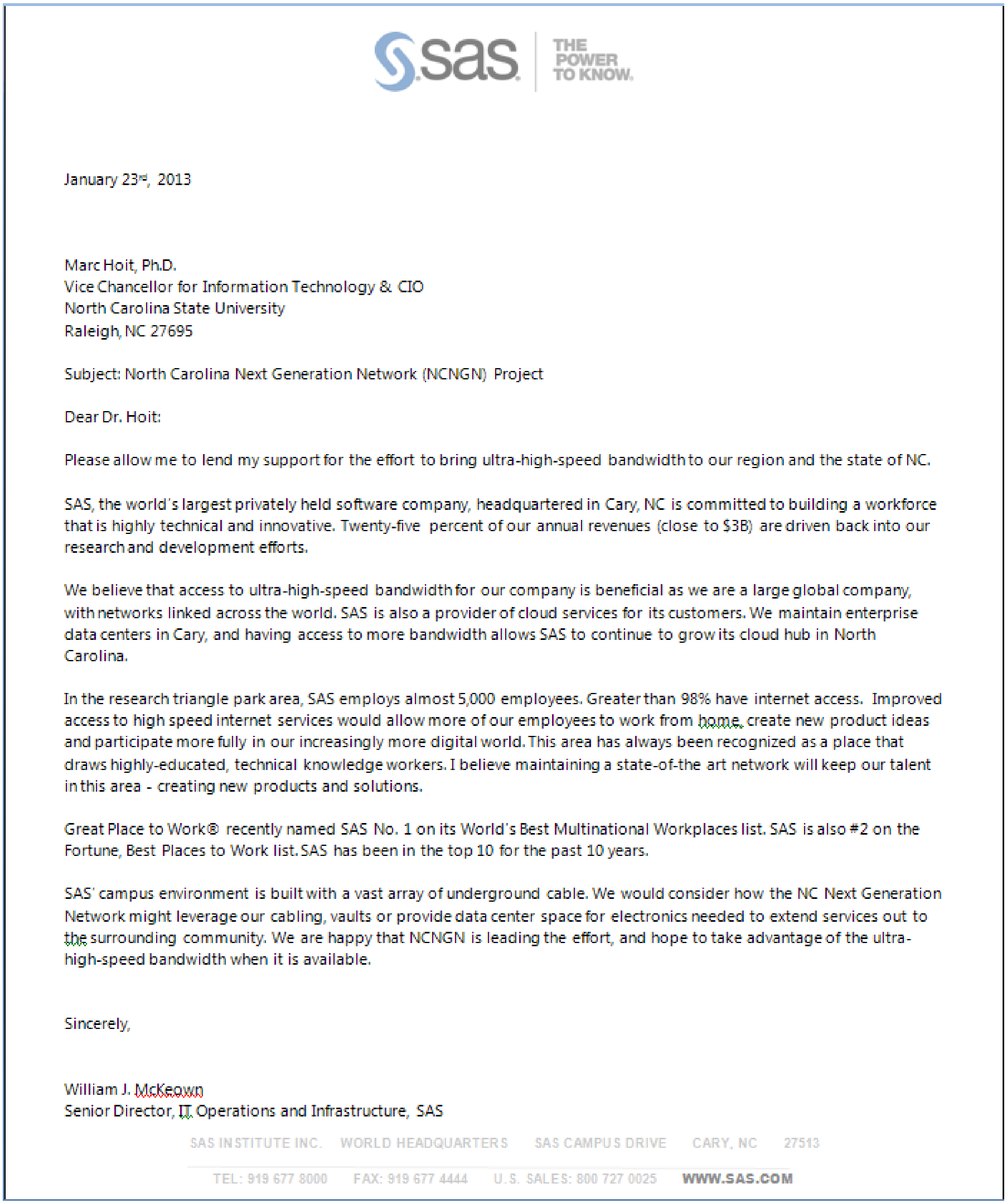
Dear Dr. Hoit:

I enjoyed your discussion of the North Carolina Next Generation Network project at the recent Chamber meeting. Investors Management Corporation and our subsidiary, Golden Corral Corporation, support the work being done to accelerate the development of ultra high-speed bandwidth. This will help us better serve our customers, franchisees and employees here and across the country. Keep up the good work.

Very truly yours,

Richard A. Urquhart III
Chief Operating Officer
Investors Management Corporation

5151 Glenwood Avenue ▪ Raleigh, North Carolina 27612 ▪ (919) 881-5200
Post Office Box 29552 ▪ Raleigh, North Carolina 27626-0552 ▪ (919) 881-5141 Fax



January 23rd, 2013

Marc Hoit, Ph.D.
Vice Chancellor for Information Technology & CIO
North Carolina State University
Raleigh, NC 27695

Subject: North Carolina Next Generation Network (NCNGN) Project

Dear Dr. Hoit:

Please allow me to lend my support for the effort to bring ultra-high-speed bandwidth to our region and the state of NC.

SAS, the world's largest privately held software company, headquartered in Cary, NC is committed to building a workforce that is highly technical and innovative. Twenty-five percent of our annual revenues (close to $3B) are driven back into our research and development efforts.

We believe that access to ultra-high-speed bandwidth for our company is beneficial as we are a large global company, with networks linked across the world. SAS is also a provider of cloud services for its customers. We maintain enterprise data centers in Cary, and having access to more bandwidth allows SAS to continue to grow its cloud hub in North Carolina.

In the research triangle park area, SAS employs almost 5,000 employees. Greater than 98% have internet access. Improved access to high speed internet services would allow more of our employees to work from home, create new product ideas and participate more fully in our increasingly more digital world. This area has always been recognized as a place that draws highly-educated, technical knowledge workers. I believe maintaining a state-of-the art network will keep our talent in this area - creating new products and solutions.

Great Place to Work® recently named SAS No. 1 on its World's Best Multinational Workplaces list. SAS is also #2 on the Fortune, Best Places to Work list. SAS has been in the top 10 for the past 10 years.

SAS' campus environment is built with a vast array of underground cable. We would consider how the NC Next Generation Network might leverage our cabling, vaults or provide data center space for electronics needed to extend services out to the surrounding community. We are happy that NCNGN is leading the effort, and hope to take advantage of the ultra-high-speed bandwidth when it is available.

Sincerely,

William J. McKeown
Senior Director, IT Operations and Infrastructure, SAS

SAS INSTITUTE INC. WORLD HEADQUARTERS SAS CAMPUS DRIVE CARY, NC 27513
TEL: 919 677 8000 FAX: 919 677 4444 U.S. SALES: 800 727 0025 WWW.SAS.COM

M*Modal™

January 21, 2012

Dr. Marc Hoit, Ph.D.
Vice Chancellor for Information Technology & CIO
Professor of Civil, Construction & Environmental Engineering
North Carolina State University
Room 1A Holladay Hall, PO Box 7015
Raleigh, NC 27695

Subject: North Carolina Next Generation network (NCNGN) Project

Dear Dr. Hoit:

I am writing in regard to the work being done to create an ultra-high-speed network in our state, particularly in the Triangle region. I became aware of this project through my company's affiliation with the Greater Raleigh Chamber of Commerce.

My company, M*Modal, uses natural language understanding technology to interpret, transcribe, and enhance dictation from doctors. Our technology enables doctors to provide better, higher quality care and improves the quality of the doctor patient relationship. Headquartered in Raleigh, we serve hundreds of thousands of physicians throughout the United States and employ over 12,000 people in the US and abroad.

As you can imagine, my company uses an enormous amount of network bandwidth as we process millions of minutes of medical dictation each month. A faster network immediately benefits my company and brings immediate value to my customers. This translates to improved medical care, healthier patients, and happier families. Our ability to compete and win business from our non-North Carolina competitors is improved, bringing revenue and jobs to our North Carolina communities.

Medical transcription services are becoming a global market. Our ability to compete globally is also important, and improvements like the North Carolina Next Generation Network project are crucial to our success around the world. We are committed to supporting and using the NCNGN infrastructure as it is developed and becomes available.

Sincerely,

Chuck Musciano
Chief Information Officer

2121 RDU Center Drive, Suite 200 | Morrisville, North Carolina 27560 | P (919) 867-3550 | solutions@mmodal.com
www.mmodal.com

WakeMed
WakeMed Health & Hospitals
3000 New Bern Avenue
Raleigh, North Carolina 27610
919-350-8000

January 16, 2013

Marc Holt, Ph.D.
Vice Chancellor for Information Technology & CIO
Professor of Civil Construction & Environmental Engineering
North Carolina State University
Room 1A, Holladay Hall, PO Box 7015
Raleigh, NC 27695

Subject: North Carolina Next Generation Network (NCNGN) Project

Dear Dr. Holt:

This letter is in support of the work being done to accelerate the deployment of ultra-high-speed bandwidth in our region and state.

From our perspective, WakeMed Health & Hospitals believes we would derive significant short-term and long-term benefits from a more robust broadband system. Faster speeds will allow WakeMed clinicians to better address our patient care mission in this community. This ultra-high-speed bandwidth will also enhance our effectiveness in the finance and reimbursement areas of WakeMed's business operations.

Currently, WakeMed has over forty-five (45) locations in Wake County and we are growing that number rapidly. The types of locations include acute in-patient medical centers, ambulatory hospital care services sites, as well as various size physician practices. Further, we are utilizing over fifty-eight (58) network circuits to serve these locations. These data connections range from leased dark fiber to large, medium and smaller managed lease lines from local network services providers. WakeMed stands ready to work with NCNGN for our data networking services. We look forward to identifying strategies for moving any and all of these data networking connections to this new high-speed networking initiative.

While we recognize there are many variables to be addressed, WakeMed is committed to using this ultra-high-speed bandwidth as soon as it becomes available. I look forward to a meeting in the near future where we can plan for WakeMed's use of this Wake County high-speed networking service.

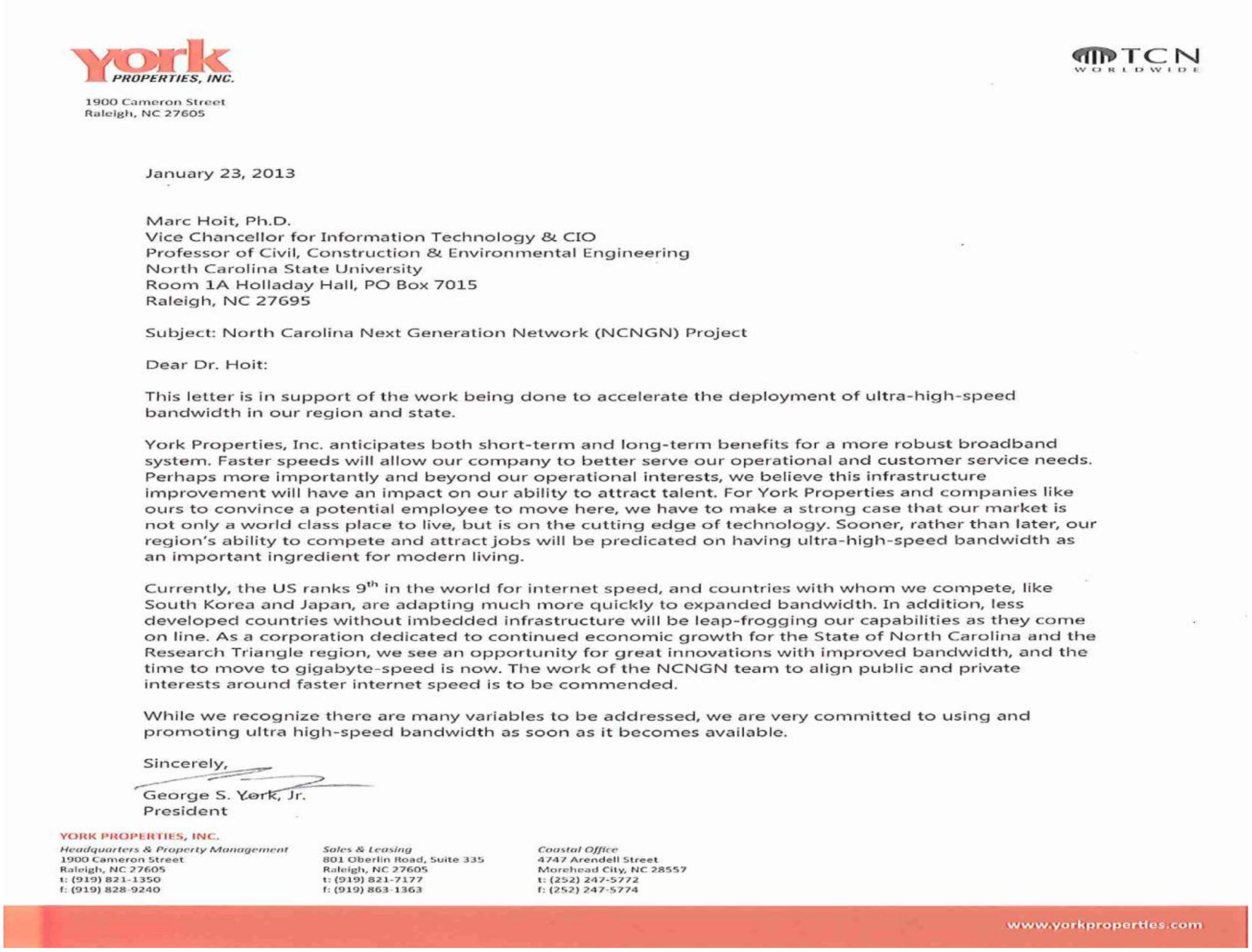
Sincerely,

Denton Arledge

Denton Arledge
Vice President & Chief Information Officer

CC: Harvey Schmitt, President and CEO
The Greater Raleigh Chamber of Commerce

Bill Atkinson, Ph.D., President and CEO
WakeMed Health and Hospitals



york
PROPERTIES, INC.
1900 Cameron Street
Raleigh, NC 27605

TCN
WORLDWIDE

January 23, 2013

Marc Hoit, Ph.D.
Vice Chancellor for Information Technology & CIO
Professor of Civil, Construction & Environmental Engineering
North Carolina State University
Room 1A Holladay Hall, PO Box 7015
Raleigh, NC 27695

Subject: North Carolina Next Generation Network (NCNGN) Project

Dear Dr. Hoit:

This letter is in support of the work being done to accelerate the deployment of ultra-high-speed bandwidth in our region and state.

York Properties, Inc. anticipates both short-term and long-term benefits for a more robust broadband system. Faster speeds will allow our company to better serve our operational and customer service needs. Perhaps more importantly and beyond our operational interests, we believe this infrastructure improvement will have an impact on our ability to attract talent. For York Properties and companies like ours to convince a potential employee to move here, we have to make a strong case that our market is not only a world class place to live, but is on the cutting edge of technology. Sooner, rather than later, our region's ability to compete and attract jobs will be predicated on having ultra-high-speed bandwidth as an important ingredient for modern living.

Currently, the US ranks 9th in the world for internet speed, and countries with whom we compete, like South Korea and Japan, are adapting much more quickly to expanded bandwidth. In addition, less developed countries without imbedded infrastructure will be leap-frogging our capabilities as they come on line. As a corporation dedicated to continued economic growth for the State of North Carolina and the Research Triangle region, we see an opportunity for great innovations with improved bandwidth, and the time to move to gigabyte-speed is now. The work of the NCNGN team to align public and private interests around faster internet speed is to be commended.

While we recognize there are many variables to be addressed, we are very committed to using and promoting ultra high-speed bandwidth as soon as it becomes available.

Sincerely,

George S. York, Jr.
President

YORK PROPERTIES, INC.
Headquarters & Property Management
1900 Cameron Street
Raleigh, NC 27605
t: (919) 821-1350
f: (919) 828-9240

Sales & Leasing
801 Oberlin Road, Suite 335
Raleigh, NC 27605
t: (919) 821-7177
f: (919) 863-1363

Coastal Office
4747 Arendell Street
Morehead City, NC 28557
t: (252) 247-5772
f: (252) 247-5774

www.yorkproperties.com

THE RESEARCH
TRIANGLE PARK

January 16, 2013

Marc Hoit, Ph.D.
Vice Chancellor for Information Technology & CIO
Professor of Civil, Construction & Environmental Engineering
North Carolina State University
Room 1A Holladay Hall, PO Box 7015
Raleigh, NC 27695

Subject: North Carolina Next Generation Network (NCNGN) Project

Dear Dr. Hoit:

This letter is in support of the work being done to accelerate the deployment of ultra-high-speed bandwidth in our region and state. At the Research Triangle Park, we are home to over 170 high technology companies that depend on high-speed bandwidth to stay competitive on the global stage.

The continued state-wide expansion of a next generation network is critical for the future development of RTP and the state of North Carolina. Sooner, rather than later, our ability to compete for and attract jobs will be predicated by having ultra-high-speed bandwidth.

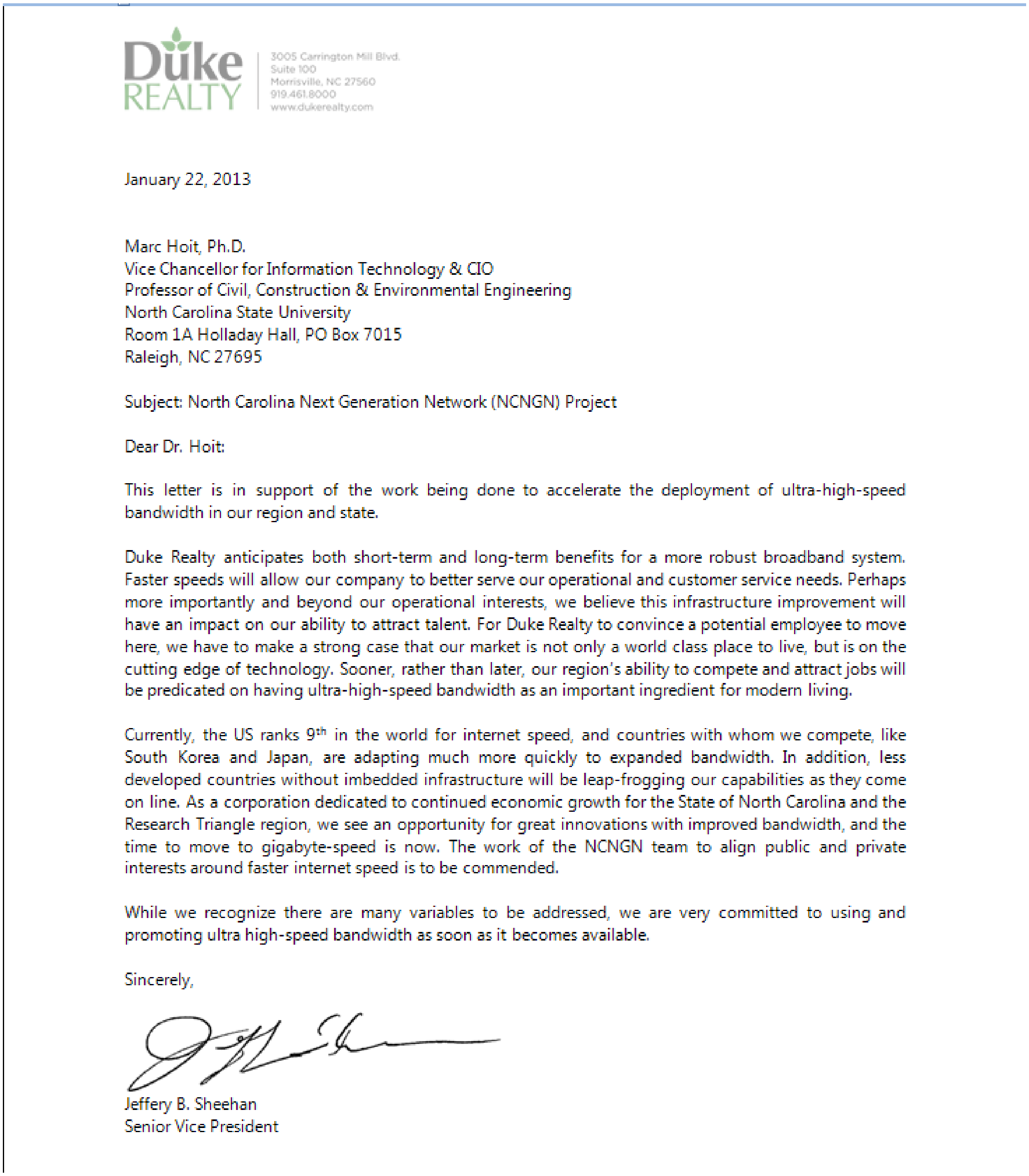
Currently, the US ranks 9th in the world for internet speed, and countries with whom we compete, like South Korea and Japan, are adapting much more quickly to expanded bandwidth. In addition, less developed countries without imbedded infrastructure will be leap-frogging our capabilities as they come online.

As an entity dedicated to continued economic growth for the State of North Carolina and the Research Triangle region, RTP sees improved bandwidth as being key for innovation – and the time to move to gigabyte-speed is now.

The work of the NCNGN team to align public and private interests around faster internet speed is to be commended. While we recognize there are many variables to be addressed, we are very committed to using and promoting ultra high-speed bandwidth as soon as it becomes available.

Sincerely,

Bob Geolas
President & CEO
Research Triangle Foundation of NC



Duke REALTY
3005 Carrington Mill Blvd.
Suite 100
Morrisville, NC 27560
919.461.8000
www.dukerealty.com

January 22, 2013

Marc Hoit, Ph.D.
Vice Chancellor for Information Technology & CIO
Professor of Civil, Construction & Environmental Engineering
North Carolina State University
Room 1A Holladay Hall, PO Box 7015
Raleigh, NC 27695

Subject: North Carolina Next Generation Network (NCNGN) Project

Dear Dr. Hoit:

This letter is in support of the work being done to accelerate the deployment of ultra-high-speed bandwidth in our region and state.

Duke Realty anticipates both short-term and long-term benefits for a more robust broadband system. Faster speeds will allow our company to better serve our operational and customer service needs. Perhaps more importantly and beyond our operational interests, we believe this infrastructure improvement will have an impact on our ability to attract talent. For Duke Realty to convince a potential employee to move here, we have to make a strong case that our market is not only a world class place to live, but is on the cutting edge of technology. Sooner, rather than later, our region's ability to compete and attract jobs will be predicated on having ultra-high-speed bandwidth as an important ingredient for modern living.

Currently, the US ranks 9th in the world for internet speed, and countries with whom we compete, like South Korea and Japan, are adapting much more quickly to expanded bandwidth. In addition, less developed countries without imbedded infrastructure will be leap-frogging our capabilities as they come on line. As a corporation dedicated to continued economic growth for the State of North Carolina and the Research Triangle region, we see an opportunity for great innovations with improved bandwidth, and the time to move to gigabyte-speed is now. The work of the NCNGN team to align public and private interests around faster internet speed is to be commended.

While we recognize there are many variables to be addressed, we are very committed to using and promoting ultra high-speed bandwidth as soon as it becomes available.

Sincerely,

Jeffery B. Sheehan
Senior Vice President

BROOKS BELL

January 7, 2013

Marc Hoit, Ph.D.
Vice Chancellor for Information Technology & CIO
Professor of Civil, Construction & Environmental Engineering
North Carolina State University
Room 1A Holladay Hall, PO Box 7015
Raleigh, NC 27695

Subject: North Carolina Next Generation Network (NCNGN) Project

Dear Dr. Hoit:

I support the work being done to deploy ultra-high-speed bandwidth in the Triangle and North Carolina.

My company, Brooks Bell, would immediately benefit from a more robust broadband system.

- Faster speeds will allow us to deliver better service to our clients. –
- Faster speeds help us attract and retain the talent we need to compete nationally

We want the Triangle to be a top 5 region for entrepreneurship, and improved bandwidth is 'table-stakes' for this vision. We cannot outperform regions such as Kansas City or Seattle for talent and innovation without equivalent bandwidth infrastructure. The time to move to gigabyte-speed is now.

I am proud and grateful for the efforts the NCNGN team has made to align public and private interests around faster internet speed.

My company, Brooks Bell, is very committed to using and promoting ultra high-speed bandwidth as soon as it becomes available.

Sincerely,

Brooks Bell

experts in online conversion®

711 HILLSBOROUGH ST, SUITE 200 | RALEIGH NC 27603 | T 919 521 5300 | BROOKSBELL.COM

January 23, 2013

Marc Hoit, Ph.D.
Vice Chancellor for Information Technology & CIO
Professor of Civil, Construction & Environmental Engineering
North Carolina State University
Room 1A Holladay Hall, PO Box 7015
Raleigh, NC 27695

Subject: North Carolina Next Generation Network (NCNGN) Project

Dear Dr. Hoit:

This letter is in support of the work being done to accelerate the deployment of ultra-high-speed bandwidth in our region and state.

Bandwidth.com anticipates both short-term and long-term benefits for a more robust broadband system. Faster speeds will allow our company to better serve our operational and customer service needs. Perhaps more importantly and beyond our operational interests, we believe this infrastructure improvement will have an impact on our ability to attract talent. For Bandwidth.com to convince a potential employee to move here, we have to make a strong case that our market is not only a world class place to live, but is on the cutting edge of technology. Sooner, rather than later, our region's ability to compete and attract jobs will be predicated on having ultra-high-speed bandwidth as an important ingredient for modern living.

Currently, the US ranks 9th in the world for internet speed, and countries with whom we compete, like South Korea and Japan, are adapting much more quickly to expanded bandwidth. In addition, less developed countries without imbedded infrastructure will be leap-frogging our capabilities as they come on line. As a corporation dedicated to continued economic growth for the State of North Carolina and the Research Triangle region, we see an opportunity for great innovations with improved bandwidth, and the time to move to gigabyte-speed is now. The work of the NCNGN team to align public and private interests around faster internet speed is to be commended.

While we recognize there are many variables to be addressed, we are very committed to using and promoting ultra high-speed bandwidth as soon as it becomes available.

Sincerely,

David Morken
CEO
Bandwidth.com

eypae.com bjac.com

EYP/BJAC a partnership
Architecture & Engineering

811 West Hargett Street
Raleigh, NC 27603

T 919 833 8818

EYP/BJAC
a partnership

January 28, 2013

Marc Hoit, Ph.D.
Vice Chancellor for Information Technology & CIO
Professor of Civil, Construction & Environmental Engineering
North Carolina State University
Room 1A Holladay Hall, PO Box 7015
Raleigh, NC 27695

Subject: North Carolina Next Generation Network (NCNGN) Project

Dear Dr. Hoit:

This letter is in support of the work being done to accelerate the deployment of ultra-high-speed bandwidth in our region and state.

I am Principal of EYP/BJAC, a national architectural and engineering firm located in Raleigh. Our work utilizing 3-D animation and imaging demands a large amount of hi-speed broadband connectivity. Faster speeds will allow our company to better serve our internal and client service needs. Perhaps more importantly and beyond our internal interests, we believe this infrastructure improvement will have an impact on our ability to attract talent. For EYP/BJAC to convince a potential employee to move to Wake County we have to make a strong case that our market is not only a world class place to live, but is on the cutting edge of technology. Sooner, rather than later, our region's ability to compete and attract jobs will be predicated on having ultra-high-speed bandwidth as an important ingredient for modern living. Our employees want to work at home when required and to do so must be able to access large files for 3-D animation and Revit.

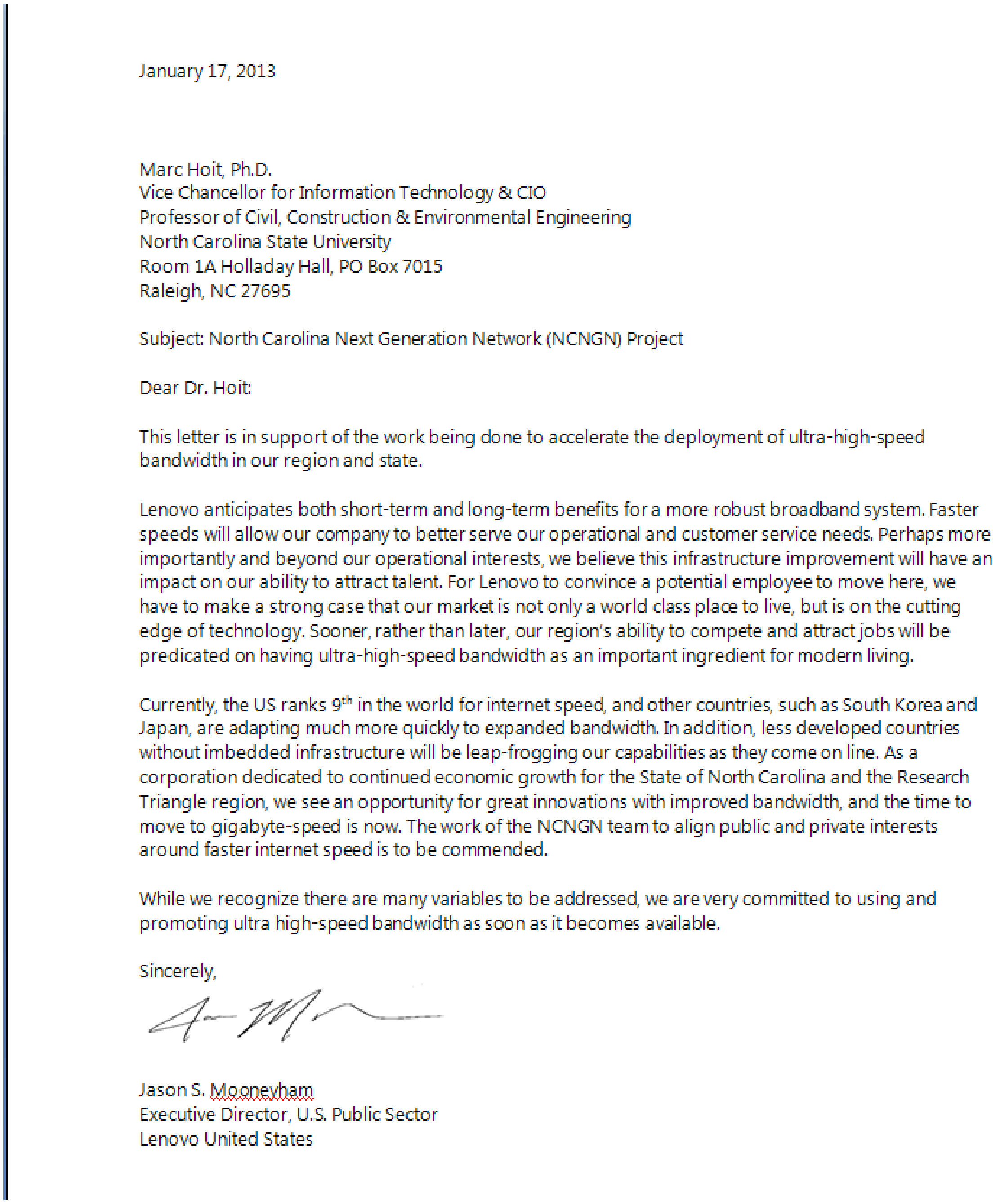
Sadly, the US ranks 9th in the world for internet speed, and countries with whom we compete, like South Korea and Japan, are adapting much more quickly to expanded bandwidth. In addition, less developed countries (like India) without imbedded infrastructure will be leap-frogging our capabilities as they come on line. As a corporation dedicated to continued economic growth for the State of North Carolina and the Research Triangle region, we see an opportunity for great innovations with improved bandwidth, and the time to move to gigabyte-speed is NOW. I applaud the work of the NCNGN team to align public and private interests around faster internet speed.

While we recognize there are many variables to be addressed, we are very committed to using and promoting ultra high-speed bandwidth as soon as it becomes available.

Yours Truly,

EYP/BJAC

Lou Jurkowski, FAIA



January 17, 2013

Marc Hoit, Ph.D.
Vice Chancellor for Information Technology & CIO
Professor of Civil, Construction & Environmental Engineering
North Carolina State University
Room 1A Holladay Hall, PO Box 7015
Raleigh, NC 27695

Subject: North Carolina Next Generation Network (NCNGN) Project

Dear Dr. Hoit:

This letter is in support of the work being done to accelerate the deployment of ultra-high-speed bandwidth in our region and state.

Lenovo anticipates both short-term and long-term benefits for a more robust broadband system. Faster speeds will allow our company to better serve our operational and customer service needs. Perhaps more importantly and beyond our operational interests, we believe this infrastructure improvement will have an impact on our ability to attract talent. For Lenovo to convince a potential employee to move here, we have to make a strong case that our market is not only a world class place to live, but is on the cutting edge of technology. Sooner, rather than later, our region's ability to compete and attract jobs will be predicated on having ultra-high-speed bandwidth as an important ingredient for modern living.

Currently, the US ranks 9th in the world for internet speed, and other countries, such as South Korea and Japan, are adapting much more quickly to expanded bandwidth. In addition, less developed countries without imbedded infrastructure will be leap-frogging our capabilities as they come on line. As a corporation dedicated to continued economic growth for the State of North Carolina and the Research Triangle region, we see an opportunity for great innovations with improved bandwidth, and the time to move to gigabyte-speed is now. The work of the NCNGN team to align public and private interests around faster internet speed is to be commended.

While we recognize there are many variables to be addressed, we are very committed to using and promoting ultra high-speed bandwidth as soon as it becomes available.

Sincerely,

Jason S. Mooneyham
Executive Director, U.S. Public Sector
Lenovo United States

January 16, 2013

Marc Hoit, Ph.D
Vice Chancellor for Information Technology & CIO
Professor of Civil, Construction & Environmental Engineering
North Carolina State University
Room 1A Holladay Hall, PO Box 7015
Raleigh, NC 27695

Subject: North Carolina Next Generation Network (NCNGN) Project

Dear Dr. Hoit:

This letter is in support of the work being done to accelerate the deployment of ultra-high-speed bandwidth in our region and state.

ABB anticipates both short-term and long-term benefits for a more robust broadband system. Faster speeds will allow our company to better serve our operational and customer service needs. ABB and North Carolina's ability to compete and attract jobs will be predicated on having world class infrastructure and ultra-high-speed bandwidth is an important ingredient in a modern economy. The work of the NCNGN team to align public and private interests around faster internet speed is to be commended.

Currently, the US ranks 9th in the world for internet speed, and countries with whom we compete, like South Korea and Japan, are adapting much more quickly to improved bandwidth. In addition, less developed countries without imbedded infrastructure will be leap-frogging our capabilities as they come on line. As a corporation dedicated to continued economic growth for the State of North Carolina and the RTP region, we see an opportunity for both efficiency and innovation with improved bandwidth, and the time to move to gigabyte-speed is now.

While we recognize there are many variables to be addressed, we are (committed) to using ultra high-speed bandwidth as soon as it becomes available.

Sincerely,

Hans Weinberg
CIO North America, ABB Inc.

ABB Inc.

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USA

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REX
UNC HEALTH CARE

January 15, 2013

Marc Hoit, Ph.D.
Vice Chancellor for Information Technology & CIO
Professor of Civil, Construction & Environmental Engineering
North Carolina State University
Room 1A Holladay Hall, PO Box 7015
Raleigh, NC 27695

Subject: North Carolina Next Generation Network (NCNGN) Project

Dear Dr. Hoit:

This letter is in support of the work being done to accelerate the deployment of ultra-high-speed bandwidth in our region and state.

Rex Healthcare anticipates both short-term and long-term benefits for a more robust broadband system. Faster speeds will allow our company to better serve our operational and customer service needs. As our business expands to support rapid growth within Wake county and surrounding region, Rex's need to support telecommuting is increasing to both grow the organization at reduced cost to physical plant and to re-purpose space for revenue generating uses. Furthermore, Rex and parent organization UNC Health Care, are increasing use of high definition (HD) video conferencing to support the expansion of our Health Care System (HCS) and increasing physician collaboration (surgeries, tumor conferences, and more). Growth in telemedicine is anticipated as well and ultra-high-speed bandwidth will accelerate all of the above.

Perhaps more importantly and beyond our operational interests, we believe this infrastructure improvement will have an impact on our ability to attract talent. For Rex Healthcare to convince a potential employee to move here, we have to make a strong case that our market is not only a world class place to live, but is on the cutting edge of technology. Sooner, rather than later, our region's ability to compete and attract jobs will be predicated on having ultra-high-speed bandwidth as an important ingredient for modern living.

Currently, the US ranks 9th in the world for internet speed, and countries with whom we compete, like South Korea and Japan, are adapting much more quickly to expanded bandwidth. In addition, less developed countries without imbedded infrastructure will be leap-frogging our capabilities as they come on line. As a corporation dedicated to continued economic growth for the State of North Carolina and the Research Triangle region

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rexhealth.com

REX
UNC HEALTH CARE

and supporting the health care needs of the same, we see an opportunity for great innovations with improved bandwidth, and the time to move to gigabyte-speed is now. The work of the NCNGN team to align public and private interests around faster internet speed is to be commended.

While we recognize there are many variables to be addressed, we are very committed to using and promoting ultra high-speed bandwidth as soon as it becomes available.

Sincerely,

Dave Bullamore
Chief Technical Architect, Enterprise Architecture
Sr. Mgr, Systems Development & Integration
Rex Healthcare | Information Technology
2709 Blue Ridge Rd Suite 340 | Raleigh, NC 27607
dave.bullamore@rexhealth.com | +1 (919) 784-4338

VIA ELECTRONIC MAIL

January 9, 2013

Marc I. Hoit, Ph.D.
Vice Chancellor for Information Technology & Chief Information Officer
North Carolina State University
Holladay Hall, Room 1A
Post Office Box 7015
Raleigh, North Carolina 27695

Re: North Carolina Next Generation Network (NCNGN) Project

Dear Dr. Hoit:

I am writing in support of the efforts to bring ultra-high-speed bandwidth to our region and state.
As a member of our business community, I find the benefits for a more robust broadband system thrilling, yet critical, to our growth. Faster speeds will empower Triangle companies to better serve their strategic, operational and customer service needs and harness new business opportunities. The increased bandwidth will also offer a more collaborative environment within the institutional, educational and healthcare communities. All are essential in supporting a dynamic and high-growth market.

As the CEO of a talent recruitment company, I believe this additional infrastructure will enhance our company's and region's ability to attract and retain talent. In our recruitment efforts for Fortune 500 and global clients, we consistently market to top technology and professional talent in the most competitive markets, including Silicon Valley, Boston, New York, Chicago, Philadelphia, Austin, Dallas, among others. In our discussions with prospective candidates, we must make a strong case that our Triangle market is on the cutting edge of technology. This is more challenging with increased competition in domestic and emerging economies. It has become apparent that our region's ability to attract talent and jobs will center around having ultra-high-speed bandwidth to support the increasing demands of the modern lifestyle and evolving workforce. As a corporation dedicated to our state's and region's continued economic growth, we see an opportunity for great innovations with improved bandwidth.

Thank you for supporting our region's migration to gigabyte-speed. The work of the NCNGN team to align public and private interests around faster internet speed is to be commended. As you and the NCNGN team continue to evaluate this opportunity, please accept our commitment to using and promoting ultra-high-speed bandwidth to our clients as soon as it becomes available.

Thank you again for support.

Sincerely,

Jennifer C. Dunleavy

Jennifer C. Dunleavy
President & CEO

WELLS FARGO

Jack Clayton
Regional President
Triangle East

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jack.clayton@wellsfargo.com

January 10, 2013

Marc Hoit, Ph.D.
Vice Chancellor for Information Technology & CIO
Professor of Civil, Construction & Environmental Engineering
North Carolina State University
Room 1A Holladay Hall, PO Box 7015
Raleigh, NC 27695

Subject: North Carolina Next Generation Network (NCNGN) Project

Dear Dr. Hoit:

This letter is in support of the work being done to accelerate the deployment of ultra-high-speed bandwidth in our region and state.

Wells Fargo & Co. anticipates both short-term and long-term benefits for a more robust broadband system. Faster speeds will allow our company to better serve our operational and customer service needs. Perhaps more importantly and beyond our operational interests, we believe this infrastructure improvement will have an impact on our ability to attract talent. For Wells Fargo & Co. to convince a potential employee to move here, we have to make a strong case that our market is not only a world class place to live, but is on the cutting edge of technology. Sooner, rather than later, our region's ability to compete and attract jobs will be predicated on having ultra-high-speed bandwidth as an important ingredient for modern living.

Currently, the US ranks 9th in the world for internet speed, and countries with whom we compete, like South Korea and Japan, are adapting much more quickly to expanded bandwidth. In addition, less developed countries without imbedded infrastructure will be leap-frogging our capabilities as they come on line. As a corporation dedicated to continued economic growth for the State of North Carolina and the Research Triangle region, we see an opportunity for great innovations with improved bandwidth, and the time to move to gigabyte-speed is now. The work of the NCNGN team to align public and private interests around faster internet speed is to be commended.

While we recognize there are many variables to be addressed, we are very committed to using and promoting ultra high-speed bandwidth as soon as it becomes available.

Sincerely,

Jack D. Clayton

Cc: Mr. Harvey Schmitt, Greater Raleigh Chamber of Commerce

Together we'll go far

Marc Hoit, Ph.D.
Vice Chancellor for Information Technology & CIO
Professor of Civil, Construction & Environmental Engineering
North Carolina State University
Room 1A Holladay Hall, PO Box 7015
Raleigh, NC 27695

Dear Dr. Hoit:

This letter is written in support of the work being done to accelerate the deployment of ultra high-speed bandwidth in our region and state.

Headquartered in Raleigh, Red Hat is a fast-growing technology company that employs 5000+ people located in 70+ offices around the world. We are currently growing at approximately 20% per year and must continually expand our locations and the capabilities therein. Half of our user population is located outside of the US and nearly a quarter of our associates work at home, full or part-time. Many of our employees are mobile and have a need to be at customer sites and/or non-Red Hat locations in order to perform their jobs effectively. As such, we must continually offer a high-quality borderless in-office experience no matter where our employees reside, no matter how big or small their 'office' is.

We anticipate both short-term and long-term benefits for a more robust broadband system. Faster and more universal access would allow Red Hat to better serve our operational and customer service needs as well as give our associates the ability to do their jobs no matter where they are. We also believe this infrastructure improvement would have an impact on our ability to attract talent. Sometimes the biggest recruiting challenge we face is not just a different company, but rather, the physical location itself.

As a corporation dedicated to continued economic growth for the State of North Carolina and the Research Triangle region, we see an opportunity for great innovations with improved bandwidth. The time to move to high speed, universal broadband access is now. The work of the NCNGN team to align public and private interests around faster Internet speed is to be commended and I look forward to the future.

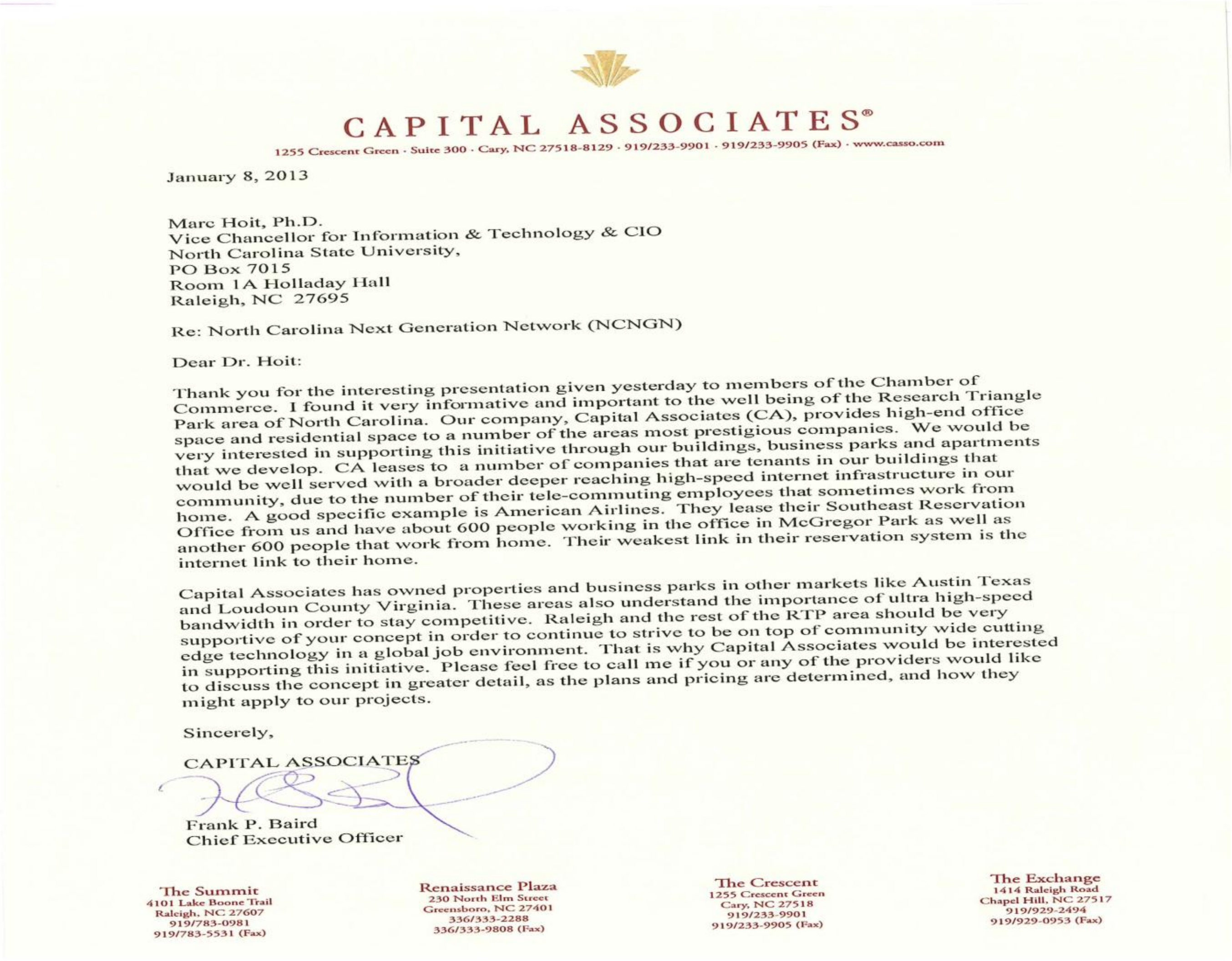
While we recognize there are many variables to be addressed, we are very committed to using and promoting ultra high-speed bandwidth as soon as it becomes available.

Sincerely,

-Craig

Craig K. Williams
Senior Director, IT Infrastructure and Operations
craigw@redhat.com

Red Hat Inc.
1801 Varsity Drive
Raleigh, NC 27606



CAPITAL ASSOCIATES®
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January 8, 2013

Marc Hoit, Ph.D.
Vice Chancellor for Information & Technology & CIO
North Carolina State University,
PO Box 7015
Room 1A Holladay Hall
Raleigh, NC 27695

Re: North Carolina Next Generation Network (NCNGN)

Dear Dr. Hoit:

Thank you for the interesting presentation given yesterday to members of the Chamber of Commerce. I found it very informative and important to the well being of the Research Triangle Park area of North Carolina. Our company, Capital Associates (CA), provides high-end office space and residential space to a number of the areas most prestigious companies. We would be very interested in supporting this initiative through our buildings, business parks and apartments that we develop. CA leases to a number of companies that are tenants in our buildings that would be well served with a broader deeper reaching high-speed internet infrastructure in our community, due to the number of their tele-commuting employees that sometimes work from home. A good specific example is American Airlines. They lease their Southeast Reservation Office from us and have about 600 people working in the office in McGregor Park as well as another 600 people that work from home. Their weakest link in their reservation system is the internet link to their home.

Capital Associates has owned properties and business parks in other markets like Austin Texas and Loudoun County Virginia. These areas also understand the importance of ultra high-speed bandwidth in order to stay competitive. Raleigh and the rest of the RTP area should be very supportive of your concept in order to continue to strive to be on top of community wide cutting edge technology in a global job environment. That is why Capital Associates would be interested in supporting this initiative. Please feel free to call me if you or any of the providers would like to discuss the concept in greater detail, as the plans and pricing are determined, and how they might apply to our projects.

Sincerely,

CAPITAL ASSOCIATES

Frank P. Baird
Chief Executive Officer

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January 28, 2013

Marc Hoit, Ph.D.
Vice Chancellor for Information Technology & CIO
Professor of Civil, construction & Environmental Engineering
North Carolina State University
Room 1A Holladay Hall, PO Box 7015
Raleigh, NC 27695

Subject: North Carolina Next Generation Network (NCNGN) Project

Dear Dr. Hoit:

MCNC has great admiration for the work being done by the steering committee leading the North Carolina Next Generation Network (NCNGN) efforts. MCNC has worked diligently to improve access to critical middle mile fiber in rural North Carolina the last five years. This spring we will complete a $144 million investment in rural broadband infrastructure.

Also, through MCNC's North Carolina Research and Education Network (NCREN), we serve the broadband needs of all public K20 education and most private education institutions in North Carolina, many research institutions, non-profit hospitals and public health agencies. These institutions are growing their bandwidth use 30-50% annually. MCNC is interested in working with providers who respond to the NCNGN RFP and potentially becoming a customer of these providers as we serve our NCREN connector community.

Understanding both fiber availability in North Carolina and serving some of the State's largest bandwidth users provides MCNC with a unique perspective of future needs. Quite simply as educational attainment, healthcare and economic vitality increasingly rely on broadband infrastructure our state can have no gaps in access. Efforts like NCNGN are critical to make certain our infrastructure keeps pace with needs and provides open access to all providers of service and consumers of service.

Please know that MCNC stands ready to assist the NCNGN efforts as needed.

Sincerely,

Joseph A. (Joe) Freddoso
President and CEO
MCNC